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PREFACE

THE articles contained in this volume were drafted before the territorial changes forming the new Province were carried out. It has therefore been found impossible to describe Eastern Bengal and Assam as a whole on the scale laid down for Provinces generally; but a short article has been prepared giving details so far as these were available. Mr. B. C. Allen, I.C.S., wrote this article, and also the articles dealing with the former Province of Assam, with the exception of the section on History, which was contributed by Mr. E. A. Gait, C.I.E. The articles on Divisions, Districts, and places therein in Eastern Bengal were written by Mr. C. G. H. Allen, I.C.S., and Mr. H. F. Howard, I.C.S., and were read by Mr. Gait. In both Eastern Bengal and Assam the greater part of the material was collected by District officers, who examined the drafts in proof.

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and by hilly country inhabited by independent tribes; on the north by the Himālayas; and on the west by the Madhumatī river up to the point where it breaks off from the Ganges, and thence by the Ganges up to Sāhibganj. From that point the boundary runs along the western border of Mālda, Dinājpur, and Jalpaigurī Districts to the foot of the Himālayas.

The total area of the Province is 111,569 square miles, of which 12,542 square miles are included in the Native States of Hill Tippera and Manipur. The present article contains but a brief account of the natural features, economic conditions, and administrative machinery of the new Province, and for further details reference should be made to the articles on Bengal and ASSAM.

Physical features. The Province includes the lower portions of the chief river systems of Northern and Eastern India, with a great variety of natural features in different tracts. That part of the area transferred from Bengal, which stretches from the foot-hills of the Himālayas to the Padmā on the south, forms part of the great Gangetic plain and is wholly alluvial, with the exception of a strip of submontane country in Jalpaigurī and of an elevated tract of quasi-laterite soil, known as the BĀRIND, on the confines of the Districts of Dinājpur, Mālda, Rājshāhi, and Bogra. The general level of the country is very low, especially in Rangpur and the central part of Rājshāhi, where the rivers have silted up and there is a network of moribund streams and watercourses. In the extreme north, the SINCHULĀ HILLS in Jalpaigurī rise abruptly to a height of from 4,000 to 6,000 feet; but the tract lying south of this within the angle formed by the converging channels of the Ganges and Brahmaputra is a rich alluvial country, which stretches north-eastwards from the Ganges, and southwards from the submontane forest belt, in an expanse of almost monotonous fertility, clothed with perennial turf, and well provided with water carriage.

From west to east at right angles to the upper portion of this tract, in Assam proper, stretches the Brahmaputra valley, which forms an alluvial plain about 450 miles long with an average breadth of 50 miles. About the centre of the valley there is a tract of mountainous country known as the MĪKĪR HILLS, which covers an area of about 2,000 square miles, and contains peaks upwards of 4,000 feet in height. Low hills of gneissic rock are also found on both sides of the river in the neighbourhood of Gauhāti and Goālpāra, but elsewhere there is little to interrupt the even level of the plain. The Brahmaputra, through the greater part of its course, is bounded on either side by

stretches of marsh land covered with high grass jungle. Farther inland the level rises, and there is a belt, usually of considerable breadth, of permanent cultivation, the staple crop raised being transplanted rice. In most parts of the valley this belt supports a fairly dense population, but nearer the hills cultivation again falls off, and grassy plains and forests stretch to their feet. The general aspect of the valley is extremely picturesque. On a clear day the view both to the north and the south is bounded by hills, while behind the lower ranges of the Himālayas snowy peaks glisten in the sun. The rice-fields are interspersed with groves of feathery bamboos, and on every side there are rivers, woods, and pools. The slopes of the lower hills are clothed with forest, and the rivers that debouch upon the plain issue through gorges of exceptional beauty.

A mountain system known as the ASSAM RANGE separates the valley just described from that of the Surmā. This range projects at right angles from the Burmese system, running almost due east and west. The central portion consists of a fine table-land at an elevation of nearly 6,000 feet above the level of the sea; but on the east and west alike the hills, as a rule, take the form of sharply serrated ridges. The highest point in British territory is Mount Jāpvo in the Nāgā Hills, whose summit is nearly 10,000 feet above sea-level. The Surmā Valley is a flat plain about 125 miles long by 60 wide, shut in on three sides by ranges of hills. The western end of this valley lies very low, and, as in the rest of the delta, the banks of the rivers are the highest portion of the country. During the rains the greater part of western Sylhet lies under water, but in Cāchār and eastern Sylhet the conditions of life are less unfavourable. Blue hills bound the view on every side, and the villages are surrounded by dense groves of fruit trees. The hills rise like a wall along the northern border, but on the south outlying ranges from the Tippera system project into the valley.

The south of the Province includes the delta of the Ganges and Brahmaputra, and is also mainly alluvial; but on the confines of Dacca and Mymensingh the MADHUPUR JUNGLE, a tract with a stiff clay soil resembling that of the Bārind, rises above the alluvium, and in the south-east the hill range that divides Assam from Burma projects into it. It is a great deltaic tract, enriched by annual deposits of fertilizing silt from a hundred interlacing rivers, and possessed of an abundant water-supply. Owing to the annual overflow of the great rivers that traverse it, this tract remains practically under water for six

months of the year, the villages stand on little mounds, rising from the waste of waters, and at this season boats are the only means of communication. The alluvial rice-fields cease as the rivers draw near the sea, and this portion of the delta is an intricate system of sea-creeks and half-formed islands, densely clothed in many places with jungle and sparsely inhabited. On the south-eastern frontier a succession of low ranges covers the east of the Chittagong Division and Hill Tippera. None of them is of any great height, but the Sītākund hill rises to 1,155 feet, and in the Chittagong Hill Tracts they attain a greater altitude, the highest peaks being Keokrādang (4,034 feet) and Pyramid Hill (3,016 feet). These hills are covered with bamboo jungle and brushwood, and are separated by cultivated river valleys; a narrow strip of rice land divides them from the sea, and to the south a series of low flat islands skirt the coast, while the shores have the same mangrove vegetation as in the Sundarbans.

Rivers.

The Tsan-po, which is probably identical with the BRAHMAPUTRA, is believed to enter the Assam Valley from the Tibetan table-land by the channel known as the DIHĀNG. It then flows for a distance of about 450 miles in a south-westerly direction, and, on reaching the western extremity of the Assam Range, turns south and finally unites with the main stream of the Ganges at Goalundo. In its course through the plains of Bengal the Brahmaputra is known as the Jamunā, and the Ganges as the Padmā, while the Meghnā is the name assigned to the gigantic river formed by the confluence of their waters. The SURMĀ is one of the largest tributaries that joins this immense system. It rises in the mountain ranges on the northern boundary of Manipur, and after a tortuous course of 560 miles falls into the old bed of the Brahmaputra near Bhairab Bāzār. All of these rivers, with their countless affluents and distributaries, are heavily laden with silt, much of which is deposited in times of flood in the neighbourhood of their banks. The slope of the country is thus always away from, and not towards, the river channels, and the water in the numerous cross-channels flows from, and not into, the main streams. A mighty volume of turgid water thus spreads over the country, until, leaving the silt behind, it finds an exit by fresh drainage channels.

Lakes and islands.

In the extreme south an interlacing network of estuaries, rivers, and watercourses encloses a vast number of islands of various shapes and sizes, which are themselves often half swamp. The largest of these are DAKHIN SHĀHBĀZPUR,

SANDWĪP, and HĀTIA, at the mouth of the Meghnā, and KUTUBDIĀ off the Chittagong coast. At the eastern end of the Assam Valley a large island, known as the MĀJULI, has been formed by a change in the main channel of the Brahmaputra. During the rains the greater part of Eastern Bengal is under water, and huge swamps are formed, some of which, like the CHALAN BĪL, are of very considerable size. In the cold season these great meres dry up, and water remains only in the lowest portions of their basins. In the Manipur valley there is a lake, the LOKTAK, which is of a much more permanent description and covers an area of about 27 square miles.

Rainfall, cyclones, and earthquakes.

The whole of the Province is blessed with an abundant rainfall, and though it is occasionally unfavourably distributed, failure of the monsoon and the famine that accompanies such failure are alike unknown. Over the Province as a whole the annual rainfall generally ranges from 70 to 140 inches. The maximum is reached at CHERRAPUNJI, on the southern face of the Khāsi Hills, which is one of the wettest places on the surface of the globe, and has an average rainfall of no less than 458 inches. The rainfall is also very heavy in the country lying immediately to the south of the Assam Range and the Himālayas. Storms and cyclones are rare in the interior of the Province, but cyclones and storm-waves from time to time sweep over the low-lying country near the estuary of the Meghnā. In October, 1897, the islands of Maiskhāl and Kutubdiā were devastated by a storm-wave, and there was a terrible cyclone in Backergunge in 1876. Northern Bengal and Assam are liable to earthquakes, which occasionally do much damage. The shock of 1897 wrecked all masonry buildings in Shillong, Sylhet, and Gauhāti, and upwards of 1,600 persons were killed by falling houses and landslips.

Population.

The total population of the Province in 1901 was 30,961,459, of whom 15,771,904, or 51 per cent., were males. Almost the whole of these persons were living in British territory, as only 457,790 were enumerated in the two Native States of Hill Tippera and Manipur. Eastern Bengal is particularly healthy, and each succeeding enumeration has disclosed a large increase in the population of this portion of the Province. Between 1881 and 1901 the population of the Dacca and Chittagong Divisions increased by 27 per cent. The climate and conditions of the Surmā Valley are also fairly favourable, and in this portion of the Province the increase between 1881 and 1901 amounted to 17 per cent. The history of Northern Bengal has

been less satisfactory. The rivers have been silting up their beds, the land is waterlogged, and epidemics of malarial fever have been serious and prolonged. Public health has been bad in Dinājpur, Rājshāhi, Rangpur, and Pābna; and the Rājshāhi Division showed an increase of only 10 per cent. in the twenty years that preceded the last Census. The Assam Valley has suffered recently from a very deadly form of malarial fever known as *kalā azār*; and in one District, in which this disease broke out in an aggravated form, the decrease of population between 1891 and 1901 amounted to no less than 25 per cent., a greater proportion than reported from any other District in British India in 1901. This decrease of the indigenous population was, however, counterbalanced by the importation of garden coolies, and the net growth in the Assam Valley Division between 1881 and 1901 amounted to 16 per cent. In the Province as a whole the increase in each intercensal period was as follows: 1872–81, 11 per cent.; 1881–91, 10 per cent.; 1891–1901, 10 per cent.; and the total increase between 1872 and 1901 was 34 per cent. The density of the Province as a whole in 1901 was 308 persons per square mile for British territory only, and 278 per square mile after including the sparsely populated Native States of Hill Tippera and Manipur. But in the several Districts the variations from this mean are very large, Dacca coming at one end of the scale with an average density of 952 per square mile and the Lushai Hills at the other with an average density of 11. With the exception of Jalpaigurī, all the Bengal Districts of the Province are fully populated, and in places the density of the rural population is extraordinary, the highest point being reached in the Srīnagar *thāna* of Dacca District, where there is a rural population of 1,787 persons per square mile. In the Surmā Valley, Sylhet has a population of over 400 per square mile; but the Districts of the Assam Valley are sparsely peopled, and the maximum is reached in Kāmrūp with 153 per square mile. In the hills the population is naturally sparse and nowhere exceeds 44 per square mile.

The great majority of the population live in rural areas, and in 1901 only 2 per cent. were enumerated in the 61 towns the Province contains. Nearly all of these places are small and unimportant, and the average population in 1901 was only 12,081. The largest towns are DACCA (90,542), and IMPHAL in Manipur (67,093), though the latter place possesses no urban characteristics and is an overgrown village rather than a town. No other town had a population of as many as 25,000; and in

only four towns—RĀMPUR BOĀLIĀ, SIRĀJGANJ, NĀRĀYANGANJ, and CHITTAGONG—did the number of inhabitants exceed 20,000. In the plains the villages usually take the form of scattered clumps of houses, embedded in dense groves of bamboos and fruit trees; but in the flooded tracts the cottages are often huddled together on sites which have been artificially raised above flood-level. In the hills the villages are generally built on open sites near the summit of the ridges, and among the Nāgās almost attain to the size of little towns.

Of the 31 millions of persons who, in round numbers, constitute the population of the Province, 18 millions are Muhammadans, 11½ millions are Hindus, and 1¼ millions animistic tribes. The Muhammadans are largely in the majority in Eastern Bengal, and in the Dacca and Chittagong Divisions there are 10½ million Musalmāns to 4¾ million Hindus. In the Rājshāhi Division they are likewise in a majority, and they form more than half the population of Sylhet. In the rest of Assam they are far from numerous, and in this portion of the Province the distinctive feature in the population is the large number of unconverted tribesmen. Tribes of Tibeto-Burman origin inhabit the hills, and the Bodo race is found in the Himālayan *tarai* as far west as Dinājpur. In Chittagong there is a considerable Buddhist population, most of whom are Maghs. Christians numbered 66,000, more than one-fourth of whom were living in the Khāsi and Jaintiā Hills. There is also a large Roman Catholic community with traces of Portuguese descent in Dacca District.

From the point of view of agriculture, the Province enjoys advantages for which it would be difficult to find a parallel in any other part of India. The rainfall is abundant, is usually well distributed, and is never known to fail. The land of the delta is enriched by yearly deposits of silt; and, in spite of the presence of a great number of rivers, several of which are of enormous size, the damage done by flood is seldom serious. The climate, the soil, and the river systems are all alike favourable to cultivation, and such a calamity as famine or even scarcity is practically unknown, though some local distress was caused by the high price of rice in 1906. Agriculture.

The staple food-crop is rice, which in 1903–4 covered 68 per cent. of the total cropped area. The abundant rainfall renders artificial irrigation unnecessary, though in the Himālayan *tarai* the people not infrequently divert the water of the hill streams to their fields, and by this means raise rich crops from soil which is sometimes poor and sandy. The two most

important crops raised for export are jute and tea. Jute in 1903–4 covered an area of 3,100 square miles. This fibre is very generally cultivated in the Districts of Rangpur, Pābna, Dacca, Mymensingh, Farīdpur, and Tippera, and is slowly spreading up the valleys of the Surmā and the Brahmaputra. The chief centres of tea cultivation are situated in the Districts of Sylhet, Cāchār, Darrang, Sibsāgar, Lakhimpur, and Jalpaigurī. In 1903 there were altogether 971 plantations with a total area of 415,700 acres under plant, which yielded 182,000,000 pounds of tea. Mustard is an important crop in the Rājshāhi Division and in the Districts of Dacca and Mymensingh. Sugar-cane is extensively cultivated in the Dacca and Rājshāhi Divisions, and in the Districts of Mymensingh and Farīdpur upwards of 100 square miles are under cane. Wheat is grown in Rājshāhi and Rangpur, and to some extent in Pābna and Goālpāra; and tobacco is a valuable crop in Jalpaigurī, Rangpur, and Mymensingh.

Forests. As might be expected from the character of its surface and climate, and the sparseness of its population, the area of forest in the Brahmaputra Valley and the Assam Range is very large. *Sāl* (*Shorea robusta*) is common in Goālpāra, but farther east the forests are, for the most part, evergreen. Here besides *sāl*, which is seldom found east of Nowgong, the most valuable trees are *nahor* (*Mesua ferrea*), *sam* (*Artocarpus Chaplasha*), *gomari* (*Gmelina arborea*), *khair* (*Acacia Catechu*), *sissū* (*Dalbergia Sissoo*), *tita sapa* (*Michelia Champaca*), *ajhar* or *jārul* (*Lagerstroemia Flos Reginae*), and *gunserai* (*Cinnamomum glanduliferum*).

In the hills good forest covers a smaller area than might have been expected. Though there is no lack of wooded country, the system of shifting cultivation practised by the hill tribes is prejudicial to the growth of valuable timber. Evergreen forests are found in the east and south of Cāchār District and in the Native States of Hill Tippera and Manipur. There are valuable forests also in Jalpaigurī and Chittagong. The principal products of Chittagong are bamboos, *jārul* (*Lagerstroemia Flos Reginae*), and *gurjan* (*Dipterocarpus turbinatus*). The total area of 'reserved' forest in what is now the Province of Eastern Bengal and Assam on June 30, 1904, was 5,944 square miles. The gross forest receipts and the expenditure in 1903–4 were 9 lakhs and 6·3 lakhs respectively.

Means of communication. The Province is endowed by nature with an admirable system of water communications, and of recent years its system of railways has been much developed. The Assam-Bengal

Railway runs from the sea at Chittagong to the eastern end of the Surmā Valley. A little to the west of Silchar the main line crosses the North Cāchār Hills and connects with the Dibru-Sadiyā Railway at the eastern end of the Brahmaputra Valley. Branch lines also run from Lākshām junction to Chāndpur, whence a steamer service plies to Goalundo, and from Lumding to Gauhāti. The northern and western parts of the Province are served by the Eastern Bengal State Railway, and a line is now under construction to Gauhāti, which will connect Calcutta and Dibrugarh by rail. A branch of this railway also runs through Dacca and Mymensingh Districts from Nārāyanganj to Jagannāthganj on the Brahmaputra.

A very complete steamer service plies upon the numerous waterways. Goalundo, at the junction of the Padmā and Brahmaputra rivers, is the terminus of a great steamer traffic up the Ganges to Ghāzīpur, up the Brahmaputra to Dibrugarh, and up the Surmā to Silchar. A daily service to Nārāyanganj connects Dacca with Calcutta, while mail steamers to Chāndpur link the Assam-Bengal Railway with the Eastern Bengal State Railway. Steamers ply daily from Calcutta through the Sundarbans to Assam, via Barisāl, Chāndpur, and Nārāyanganj. On the Padmā steamers ply between Dāmukdia Ghāt and Rāmpur Boāliā and Godāgari, with a continuation to English Bāzār (Mālda), and between English Bāzār and Sultānganj. From Khulnā steamers run to Barisāl, Noākhāli, Nārāyanganj, Mādārīpur, and other places, and there is a daily service on the Brahmaputra from Goalundo to Phulcharī. Backergunge District is also well served by steamers, and during the rains small feeder-steamers ply on the tributaries of the Barāk (Surmā) and Brahmaputra.

The administration of the Province is entrusted to a Lieutenant-Governor, acting immediately under the orders of the Government of India. The general executive staff is principally recruited from members of the Covenanted Civil Service, with a certain proportion of officers deputed from the Indian Army who, at the time of the formation of the new Province, were serving in Assam, together with a Provincial and a Subordinate Service, the great majority of whose members are natives of the country. The first Lieutenant-Governor was Sir J. B. Fuller, previously Chief Commissioner of Assam. He was succeeded in 1906 by Sir L. Hare. Government.

As in other parts of India, the unit of administration is the District, the area in charge of the District Magistrate and Collector, or Deputy-Commissioner as he is called in Assam.

There are altogether 27 Districts in the Province, with an average area of 3,668 square miles and an average population of 1,129,766. These Districts are grouped together to form the five Divisions of CHITTAGONG, DACCA, RĀJSHĀHI, the ASSAM VALLEY, and the SURMĀ VALLEY AND HILL DISTRICTS, each of which is under a Commissioner. Districts are further subdivided into subdivisions, of which there are 67, with an average area of 1,478 square miles and an average population of 455,279. In Assam the Subdivisional Magistrate exercises within his own subdivision most of the functions of a District officer, but in Eastern Bengal his duties are principally of a judicial nature. In the permanently settled portions of the Province the smallest unit of administration is the *thāna* or police station; in the five upper Districts of the Assam Valley it is the *mauza*, or area for which an officer called the *mauzadār* has contracted to pay the land revenue. In the one tract it is the police who are the visible representatives of Government in rural areas; in the other it is the land revenue officials. The Lieutenant-Governor, in addition to his personal staff, is assisted by three secretaries in the general departments and one secretary in the department of Public Works. Revenue business is, to a great extent, entrusted to a Board, consisting of two senior Civilians. Separate officers are also in charge of the various departments, such as Police, Prisons, Excise, Registration, Land Records and Agriculture, Education, Medical, and Sanitation. The Forest department is under the control of a Conservator, and Civil Accounts are in charge of an Accountant-General, who is directly subordinate to the Finance Department of the Government of India. The Post Office department is in charge of two Deputy-Postmasters-General, and the Telegraph department in that of a Superintendent. These three officers are not, however, under the orders of the Lieutenant-Governor.

The only Native States of any importance under the Government of Eastern Bengal and Assam are HILL TIPPERA and MANIPUR. The Magistrate and Collector of Tippera District acts as Political Agent for Hill Tippera. The Rājā of Manipur, who was appointed after the outbreak of 1891, was placed upon the *gaddi* in 1907, and during his minority the State has been administered by the Political Agent, who has always been a member of the Assam Commission.

Legislation and justice.

Acts of general application are passed in the Council of the Governor-General for making Laws and Regulations, and come into force in the Province of Eastern Bengal and Assam as in

other parts of India. Steps have also been taken to provide for the initiation of measures of purely local interest, and the Lieutenant-Governor has been authorized to form a Council of fifteen members for making laws and regulations. Bills passed by this Council require the assent of the Lieutenant-Governor and also of the Governor-General.

Stipendiary magistrates are the foundation of the system of criminal administration, though in Eastern Bengal a considerable amount of work is done by honorary magistrates sitting either singly or as benches. Appeals from their decision lie to the Sessions Judge, except in the case of magistrates with second and third-class powers, from whom appeals lie either to the District Magistrate or to some magistrate who has been specially empowered in that behalf. Appeals from Sessions Judges are heard by the High Court at Calcutta. In Eastern Bengal and Sylhet civil work is in charge of District and Subordinate Judges and a large staff of Munsifs. In the Assam Valley and the Cāchār Plains Assistant Magistrates act as Munsifs, and the District Magistrate discharges the functions of a Subordinate Judge. The ultimate court of appeal for civil work is also the High Court at Calcutta. In the Hill Districts and certain frontier tracts the High Court has no jurisdiction, except in criminal cases over European British subjects, and the District Magistrate discharges the functions of a District and Sessions Judge.

Revenue and finance.

The receipts under the principal heads of revenue have been: (1880–1) 256·4 lakhs, (1890–1) 302·5 lakhs, (1900–1) 368·3 lakhs, and (1903–4) 371·9 lakhs. The principal heads of receipts in the last-mentioned year were land revenue, 177·4 lakhs; stamps, 88·5 lakhs; excise and opium, 61·7 lakhs; cesses, 35·4 lakhs; and income tax, 9·1 lakhs. Under the financial settlement for three years made in 1906 the Province receives one-half of the revenue from land, stamps, excise, assessed taxes, and forests, and is responsible for half the expenditure under heads other than land revenue, the greater part of the charges under which are debited to Provincial. The receipts and expenditure on account of general administration, courts of law, registration, police, medical, education, political, superannuation, stationery and printing, and various minor items are entirely Provincial. An annual contribution of 6·2 lakhs is made in favour of Imperial revenues. To cover the initial cost of new administrative arrangements, a grant of 30 lakhs has been added to the 20 lakhs originally given to Assam. The budget figures for 1906–7 are shown in Table III on p. 15.

Public works.

The Public Works department is under the general charge of a Chief Engineer, who is also a secretary to the Local Government, and is aided by an under-secretary. Eastern Bengal and Assam each form a circle in charge of a Superintending Engineer. The executive staff includes 8 Executive and 4 Assistant Engineers. Local works in Eastern Bengal are generally entrusted to a District Engineer, engaged by the District board and working under the supervision of an Inspector of Works, of whom there are two.

Police.

The police are under the general control of an Inspector-General, who is assisted by two Deputy-Inspectors-General stationed at Dacca and Silchar. The sanctioned staff consists of 27 District and Assistant Superintendents, 79 inspectors, 778 sub-inspectors, and 7,876 head constables and men. Rural police, who are employed in every District in the plains outside the boundaries of Assam proper, numbered 56,875 in 1904. There is also a large force of military police, numbering 2,876 officers and men, who are employed on quasi-military duties, chiefly in Assam.

Prisons.

In 1903 there were 2 Central, 19 District, and 47 subsidiary jails in the Province, and the daily average number of prisoners was 6,682. The larger jails are under the management of whole-time Superintendents, and the control of the department is vested in an Inspector-General of Prisons.

Education.

The general management of the Educational department is entrusted to the Director of Public Instruction, who is assisted by five Inspectors of schools and a staff of deputy-inspectors and sub-inspectors. There are 12 Arts colleges in the Province, situated at Dacca (2), Chittagong, Barisāl, Comilla, Pābna, Tangail, Mymensingh, Rājshāhi, Gauhāti, Sylhet, and Agartalā (Hill Tippera). Only four of these colleges receive any direct assistance from the state. On March 31, 1905, 1,724 students were on the roll of the eleven colleges in British territory. In 1903-4 the Province contained 1,147 secondary, 20,628 primary, and 4,121 special schools. The total number of scholars was: boys, 715,861, and girls, 65,290.

Medical.

The Medical department is divided into two branches. An Inspector-General of civil hospitals is the head of the department, while a Sanitary Commissioner has been appointed to deal with all questions of a purely sanitary character. In 1903 the Province contained 391 hospitals and dispensaries, at which more than 3,000,000 patients were treated and 83,483 operations performed. There are lunatic asylums at Dacca and Tezpur, and an asylum for the reception of lepers at Sylhet.

TABLE I

DISTRIBUTION OF POPULATION IN EASTERN BENGAL AND ASSAM, ACCORDING TO THE CENSUS OF 1901

District or State.	Area in square miles.	Number of towns.	Number of villages.	Total Population.			Urban Population.			Population per square mile.
				Persons.	Males.	Females.	Persons.	Males.	Females.	
Districts.										
Rājshāhi	2,593	[illegible]	6,344	1,462,407	741,690	720,717	30,243	16,160	14,083	564
Dinājpur	3,946	1	7,841	1,567,080	823,972	743,108	13,430	8,067	5,363	397
Jalpaigurī	2,962	2	766	787,380	422,877	364,503	10,289	6,513	3,776	266
Rangpur	3,493	6	5,212	2,154,181	1,125,109	1,029,072	29,484	18,892	10,592	617
Bogra	1,359	2	3,865	854,533	437,349	417,184	11,198	6,319	4,879	629
Pābna	1,839	2	3,720	1,420,461	709,396	711,065	41,538	22,209	19,329	772
Mālda	1,899	3	3,555	884,030	437,639	446,391	34,426	17,654	16,772	466
Rājshāhi Division	18,091	18	31,303	9,130,072	4,698,032	4,432,040	170,608	95,814	74,794	505
Dacca	2,782	2	7,263	2,649,522	1,312,417	1,337,105	115,014	67,331	47,683	952
Mymensingh	6,332	8	9,770	3,915,068	2,014,805	1,900,263	105,397	59,733	45,664	618
Farīdpur	2,281	2	5,283	1,937,646	970,164	967,482	29,112	16,238	12,874	849
Backergunge	4,542	5	4,612	2,291,752	1,175,903	1,115,849	45,574	30,996	14,578	505
Dacca Division	15,937	17	26,928	10,793,988	5,473,289	5,320,699	295,097	174,298	120,799	677
Tippera	2,499	3	5,361	2,117,991	1,085,989	1,032,002	48,446	28,656	19,790	848
Noākhāli	1,644	1	2,633	1,141,728	568,777	572,951	6,520	4,303	2,217	694
Chittagong	2,492	2	1,450	1,353,250	641,392	711,858	25,985	15,540	10,445	543
Chittagong Hill Tracts	5,138	...	296	124,762	68,238	56,524	...	...	...	24
Chittagong Division	11,773	6	9,740	4,737,731	2,364,396	2,373,335	80,951	48,499	32,452	402

TABLE I

DISTRIBUTION OF POPULATION IN EASTERN BENGAL AND ASSAM, ACCORDING TO THE CENSUS OF 1901 (*continued*)

District or State.	Area in square miles	Number of towns.	Number of villages.	Total Population.			Urban Population.			Population per square mile.
				Persons.	Males.	Females.	Persons.	Males.	Females.	
Districts.										
Sylhet	5,388	5	8,330	2,241,848	1,141,060	1,100,788	30,832	19,046	11,786	416
Cāchār	3,769	1	1,332	455,593	244,161	211,432	9,256	6,575	2,681	121
Khāsi and Jaintiā Hills	6,027	1	1,839	202,250	97,221	105,029	8,384	4,980	3,404	34
Nāgā Hills	3,070	1	292	102,402	51,656	50,746	3,093	2,174	919	33
Lushai Hills	7,227	...	239	82,434	39,004	43,430	...	...	...	11
Surmā Valley and Hill Districts Division	25,481	8	12,032	3,084,527	1,573,102	1,511,425	51,565	32,775	18,790	121
Goālpāra	3,961	2	1,461	462,052	242,685	219,367	10,024	6,868	3,156	117
Kāmrūp	3,858	2	1,716	589,187	292,869	296,318	20,408	11,993	8,415	153
Darrang	3,418	1	1,275	337,313	176,030	161,283	5,047	3,568	1,479	99
Nowgong	3,843	1	1,117	261,160	132,995	128,165	4,430	2,659	1,771	68
Sibsāgar	4,996	3	2,109	597,969	316,985	280,984	10,970	6,660	4,310	120
Lakhimpur	4,529	1	1,123	371,396	199,359	172,037	11,227	7,091	4,136	82
Assam Valley Division	24,605	10	8,801	2,619,077	1,360,923	1,258,154	62,106	38,839	23,267	106
Gāro Hills	3,140	...	1,026	138,274	70,035	68,239	...	...	...	44
Total British Territory	99,027	59	89,830	30,503,669	15,539,777	14,963,892	660,327	390,225	270,102	308
States.										
Hill Tippera	4,086	1	1,463	173,325	92,495	80,830	9,513	5,847	3,666	42
Manipur	8,456	1	467	284,465	139,632	144,833	67,093	32,965	34,128	34
GRAND TOTAL	111,569	61	91,760	30,961,459	15,771,904	15,189,555	736,933	429,037	307,896	278

TABLE II

Statistics of Local Boards and Municipalities, Eastern Bengal and Assam, 1903–4

	Number.	Income.	Expenditure.
		Rs.	Rs.
District and Local Boards . .	33	43,63,338	39,48,543
Municipalities	49	12,98,747	11,71,873

TABLE III

Principal Sources of Provincial Revenue, Eastern Bengal and Assam

(In thousands of rupees)

	Budget for 1906–7.	
	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenue.
Land revenue	1,93,62	97,16
Stamps	89,00	44,50
Excise	63,25	31,63
Assessed taxes	9,60	4,80
Forests	13,20	6,60
Registration	7,60	7,60
Other sources	64,08	31,56
Total	4,40,35	2,23,85

TABLE IV

Provincial Expenditure under Principal Heads, Eastern Bengal and Assam

(In thousands of rupees)

	Budget for 1906–7.
Opening balance	62,00
Charges in respect of collection (principally land revenue and forests)	39,53
Salaries and expenses of civil departments:—	
(*a*) General administration	9,53
(*b*) Law and justice	46,06
(*c*) Police	39,96
(*d*) Education	12,73
(*e*) Medical	7,24
(*f*) Other heads	5,70
Pension and miscellaneous civil charges	10,35
Public works	55,93
Other charges and adjustments	13,42
Total expenditure	2,40,45
Closing balance	48,22

ASSAM

Physical aspects. Boundaries and area.

Assam[1].—The Province of Assam, which lies on the north-eastern border of Bengal, and is one of the frontier Provinces of the Indian Empire, is situated between 22° 19′ and 28° 16′ N. and 89° 42′ and 97° 12′ E. It is bounded on the north by the eastern section of the great Himālayan range, the frontier tribes from west to east being successively the Bhotiās of Bhutān, the Bhotiās of Towang—a province subject to Lhāsa—Akās, Daflās, Mīris, Abors, and Mishmis; on the north-east by the Mishmi Hills, which sweep round the head of the Brahmaputra Valley; on the east by the mountains which are inhabited by Khamtis, Singphos, and various Nāgā tribes, and by the Burmese frontier where it marches with that of the State of Manipur; on the south by the Chin Hills, the Chittagong Hill Tracts, and the State of Hill Tippera; and on the west by the Bengal Districts of Tippera, Mymensingh, and Rangpur, the State of Cooch Behār, and Jalpaigurī District. The total area of the Province, including the Native State of Manipur (8,456 square miles), is 61,682 square miles.

Origin of name.

The name 'Assam' is, according to some, derived from the Sanskrit *asama*, which means 'peerless' or 'unequalled.' It has been suggested that this title was applied to the Shan invaders, now called Ahoms, and was transferred from them to the country that they conquered. This derivation is, however, open to the serious objection that in Assamese *s* is softened into *h*, as in the name of the tribe; and there is no apparent reason why it should have been retained in the name of the country. It is doubtful also whether either the Ahoms themselves, or the tribes they found in occupation of the

[1] Since the following article was written the small Province of Assam has ceased to exist as a separate unit, and has been amalgamated with fifteen Districts of Eastern and Northern Bengal to form the larger Province of Eastern Bengal and Assam, which is ruled by a Lieutenant-Governor, with a Legislative Council. The account of the general administrative staff, the various departments, and the system of legislation is thus obsolete; and the arrangements which are now in force will be found briefly described in the article on EASTERN BENGAL AND ASSAM. The remainder of the article affords a generally correct account of that portion of the new Province which was once known as Assam.

country, would use a Sanskrit term to denote the dominant race.

The Province falls into three natural divisions: the valley of the Surmā or Barāk, the valley of the Brahmaputra or Assam proper, and the intervening range of hills. The State of Manipur, which lies east of Cāchār, is under the control of the Local Administration, and the hills to the south of that District inhabited by the Lushais have recently been brought under British rule. Natural divisions.

The Surmā Valley is a flat plain about 125 miles long by 60 wide, shut in on three sides by ranges of hills. The river from which the valley takes its name rises on the southern slopes of the mountain ranges on the borders of the Nāgā Hills District, and flows south through the Manipur hills. At Tipaimukh, it turns sharply to the north and takes a tortuous course, with a generally westward direction, through Cāchār District. On the western boundary of Cāchār it divides into two branches, the northern of which, known as the SURMĀ, flows near the Khāsi Hills past Sylhet and Chhātak, till it turns south at Sunāmganj. The southern branch, called at first the Kusiyārā, again divides into two streams, known as the Barāk and the Bibiyānā, or Kālni, but both branches rejoin the Surmā on the western boundary of the Province. The chief tributaries of the river on the north, after it enters British territory, are the JIRI and JĀTINGĀ from the North Cāchār Hills, and the BOGAPĀNI and JĀDUKĀTA from the Khāsi and Jaintiā Hills. On the south it receives from the Lushai Hills the SONAI, the DHALESWARI with its second channel the Kātākhāl, and the SINGLĀ; and the LANGAI, MANU, and KHOWAI from Hill Tippera. The Surmā Valley.

The western end of the valley lies very low, and at Sylhet the low-water level of the Surmā is only 22·7 feet above the sea. The banks of the rivers are raised by deposits of silt above the level of the surrounding country, and are lined with villages, which in the rainy season appear to be standing in a huge lake. Farther east the country rises, and fields covered with *sail* (transplanted winter rice) take the place of swamps, in which only the longest-stemmed varieties of paddy can be grown; but even here there are numerous depressions, or *haors* as they are called, in the lowest parts of which water remains during the dry season, and which can be used only for grazing or the growth of winter crops. In western Sylhet the houses of the villagers are crowded together, gardens and fruit trees are scarce, and the scenery at all seasons of the year is tame

and uninteresting. Cāchār and the eastern portion of Sylhet have, on the other hand, much to please the eye. Blue hills bound the view on almost every side, the villages are buried in groves of slender palms, feathery bamboos, and broad-leaved plantains, and even in the dry season the country looks fresh and green. The level of the plain is broken by low ranges and isolated hills, and here and there beds of reeds and marshes lend variety to the scene. Little or no forest exists in Sylhet, but there are extensive Reserves in the south and east of Cāchār District.

The Brahmaputra Valley.

The Brahmaputra Valley is an alluvial plain about 450 miles in length, with an average breadth of about 50 miles, shut in, like the Surmā Valley, by hills on every side except the west. In its lower portion it lies almost east and west, but in its upper half it trends somewhat towards the north-east. The BRAHMAPUTRA flows through the centre of this plain, and receives in its course the drainage of the Himālayas on the north, and the Assam Range on the south. The principal tributaries on the north bank are the DIBĀNG, DIHĀNG, SUBANSIRĪ, BHARELI, DHANSIRI, BARNADĪ, MANĀS with its tributary the AI, the CHĀMPĀMATI, SARALBHĀNGA, and SANKOSH; on the south, the larger affluents are the NOA, BURI DIHING, DISĀNG, DIKHO, JHĀNZI, and another DHANSIRI. A short distance below the junction with this Dhansiri a considerable body of water separates itself from the Brahmaputra, and, under the name of the KALANG, flows with a tortuous course through Nowgong District, rejoining the main stream about 10 miles above Gauhāti. The KALANG receives the KAPILI, which brings to it a large part of the drainage of the Mīkīr, the North Cāchār, and the Jaintiā Hills, and the DIGRU from the Khāsi Hills. Below Gauhāti the most considerable affluents on the south bank are the KULSI and JINJIRĀM.

The valley, as a whole, is a plain of fairly uniform breadth, except in the centre, where the Mīkīr Hills project from the main mass of the Assam Range, almost up to the southern branch of the Brahmaputra. Between Tezpur and Dhubri there are outcrops of gneissic rock above the alluvium, even on the north bank of the river, and the central portion of Goālpāra District is much broken by ranges of low hills; but elsewhere there is little to interrupt the even level of the plain.

The Brahmaputra, through the greater part of its course, is bounded on either side by stretches of marsh land covered with thick grass jungle, interspersed here and there with patches of mustard and summer rice. Farther inland the level

rises, and there is a belt, usually of considerable breadth, of permanent cultivation. The plain is covered with rice-fields and dotted over with clumps of bamboos, palms, and fruit trees, in which are buried the houses of the cultivators. In most parts of the valley this belt supports a fairly dense population; but near the hills cultivation again falls off, and grassy plains and forests stretch to their feet. Even here, however, rice is grown on fields irrigated from the hill streams, and European enterprise has in many places felled the forests and opened prosperous tea gardens. Little of this is seen by the traveller on the river steamer, and he is apt to receive the impression that Assam is a wilderness of impenetrable jungle, the home of nothing but wild beasts. This view is but partially correct. There are still large areas of waste land, swamps, forests, and hills; but in parts of the valley the population is beginning to press upon the soil, and little good land remains available for settlement. Few places in the Brahmaputra Valley would not appeal to a lover of the picturesque. On a clear day the view to both the north and south is bounded by hills, while behind the lower ranges of the Himālayas snowy peaks glisten in the sun. The rice-fields are interspersed with groves of feathery bamboos, on every side are pools, rivers, and woods, and in the wilder parts nature is seen freed from the restraining hand of man. The slopes of the lower hills are clothed with forest, and the rivers that debouch upon the plain issue through gorges of exceptional beauty.

The Assam Range.

The range of mountains which separates these two valleys projects at right angles from the Burmese system, and lies almost due east and west. At its western end it attains a height of more than 4,600 feet in the peak of Nokrek, above the station of Turā. The hills are here broken up into sharply serrated ridges and deep valleys, all alike covered with forest. Farther east, in the Shillong peak, they reach a height of 6,450 feet; but this is only the highest point in a table-land hardly any part of which falls much below 6,000 feet. The denser forest growth has here disappeared, and there are wide stretches of rolling down, dotted with clumps of oak and pine. On their southern face the hills rise like a level wall abruptly from the plain, with occasionally a deep ravine, which the rivers, fed by the heavy rainfall of that region, have cut through the plateau. Towards the Jaintiā and North Cāchār Hills the level falls; but the BARAIL range, which commences on the south-east margin of the Khāsi-Jaintiā plateau, rises by sudden leaps

to a considerable height, and among the hills bordering the Jātingā valley summits of from 5,000 to 6,000 feet are found. Farther east, the highest point in the Province is reached in JĀPVO, on the border of the Nāgā Hills District. The hills here are all of the serrated type, and their sides are clothed with forest or, on the sites of fallowing *jhūms*[1], with dense bamboo or grass jungle. The Lushai Hills, which divide Burma from Assam, run at right angles to the Assam Range in parallel ridges. They are for the most part covered with bamboo jungle and rank undergrowth, but in the eastern portion open grass-covered slopes are found, with groves of oak and pine, interspersed with rhododendron. The State of Manipur consists of a fertile valley, covering an area of about 650 square miles, surrounded by ranges of hills.

Lakes and islands. Numerous swamps and *jhīls* are found in both valleys, and during the rains the western portion of Sylhet lies under water; but in British territory there are no lakes of any considerable importance during the dry season. In Manipur the LOKTAK Lake, a sheet of water covering about 27 square miles, lies to the south of Imphal, the capital. The only island of any size is the MĀJULI, a tract of land covering 485 square miles in Sibsāgar District, which is surrounded by the waters of the Brahmaputra and the Subansirī.

Geology[2]. The Surmā Valley is an alluvial tract, in which the process of deltaic formation has not proceeded so rapidly as in the rest of the Gangetic plain. Disastrous floods were more common at the end of the eighteenth century than they are at the present day, and it seems possible that the general level may have been appreciably raised within the last hundred years, by the silting up of depressions and the sediment deposited by the rivers in their annual inundations. Low ranges of hills, which for the most part consist of Upper Tertiary sandstones, project into the valley from the south; and its surface is dotted with isolated hills called *tīlas*, from 50 to 200 feet high, composed of layers of sand, clay, and gravel, often highly indurated with ferruginous cement. In the centre of the Assam Valley the soil consists of a light layer of clay superimposed upon beds of sand. Farther back

[1] A *jhūm* is a piece of land which has been cleared and cultivated for two or three seasons and then allowed a rest for several years; see p. 63.

[2] This section has been compiled from notes furnished by Mr. P. N. Bose, of the Geological Survey of India, and from an account of Assam by Sir Charles Lyall, published in the *General Administration Report* of the Province for 1882-3.

from the Brahmaputra the alluvium is more consolidated, and here and there are to be found the remains of an older alluvium of a closer and heavier texture, which corresponds to the high land of the Gangetic plain. Outliers of gneissic rock from the Assam Range are common between Goālpāra and Gauhāti, and are found as far east as Tezpur.

The basis of the Assam Range is a gneissic rock. At its western end sandstones and conglomerates, which are referable to the Cretaceous system, are superimposed upon the gneiss, and are themselves overlaid by limestone and sandstone of the Nummulitic age. Farther eastwards what is known as the Shillong plateau rises steeply from the Surmā Valley, but on its northern face falls away in a series of low hills towards the Brahmaputra. The gneiss is here succeeded by the Shillong or transition series, which consists of quartzites, conglomerates, phyllites, and schists, through which appear granite and dioritic rocks. Upon this series have been superimposed sandstones and conglomerates of the Cretaceous age, which contain occasional coal seams, and which are in their turn overlaid by beds of the Nummulitic or Lower Tertiary period, consisting of limestone and sandstone with inter-stratified shales and coal deposits. Along the southern edge of the plateau in the neighbourhood of Cherrapunji a group of bedded basaltic rocks, known as the Sylhet trap, has been forced up between the Cretaceous and the older formations. The Mymensingh border is fringed by low ranges of hills of Upper Tertiary formation; and though this series has been almost entirely removed by denudation below the southern scarp of the Khāsi Hills, they appear again east of Jaintiāpur, and their soft, massive, greenish sandstones rise rapidly from this point into the Barail range. This range appears to have thrust the Nummulitic and older formations in a north-easterly direction; but west of Cāchār it curves to the north-east, and finally merges into the Burmese mountain system, of which it forms a part. Little is known of the eastern extremity of the Assam Range; but it appears that the Upper Tertiary sandstones are succeeded by a series of hard sandstones, slates, and shales with quartzose beds, while still farther east serpentine dikes, identical in composition with those of Burma, run north and south. Upper Tertiary rocks are believed to constitute the Pātkai range, and are found again capping the hills which look down upon the Chindwin valley; but between these two points there intervenes a belt of pre-Tertiary beds about 100 miles in width. The hills containing the coal measures of Sibsāgar and Lakhimpur consist of an

enormous thickness of sandstones, the upper series of which are topped with conglomerates and clay. The Himālayas north of the Brahmaputra have never been properly explored, but there is reason to suppose that they are composed of great thicknesses of soft massive sandstones, of Tertiary age and fresh-water origin. The economic aspect of the geology of the Province is referred to in the section on Mines and Minerals.

Botany. The uncultivated portions of the Assam Valley are usually covered with forest, or with grass and reeds which are sometimes nearly 20 feet in height. The three commonest varieties are *ikra* (*Saccharum arundinaceum*), *nal* (*Phragmites Roxburghii*), and *khagari* (*Saccharum spontaneum*). At the western end the prevalent tree is *sāl* (*Shorea robusta*); but farther east the forests are evergreen, the chief constituents being species of *Amoora*, *Michelia*, *Magnolia*, *Stereospermum*, *Quercus*, *Castanopsis*, *Ficus*, and *Mesua*. Various kinds of palms, canes, tree-ferns, bamboos, and plantains are common. The vegetation of Sylhet and Cāchār does not differ materially from that of Eastern Bengal. There is comparatively little forest, but in the swampy parts many species of reeds and aquatic plants are found. The greater part of the Assam Range is covered with dense tree forest or bamboo jungle, but the Khāsi plateau is a fine succession of rolling downs dotted with groves of oak and pine. The flora of this tract is extremely rich, and upwards of 2,000 flowering plants were collected by Dr. Hooker within ten miles of Cherrapunji, while various kinds of orchids and balsams, rhododendrons, azaleas, and wild roses are found on every side. The Nāgā and Manipur Hills have a flora in many respects similar to that of the Khāsi Hills, but in addition possess a distinct Sikkim element, while the Lushai Hills are botanically part of the Burmese system.

Fauna. The most noteworthy wild animals are elephants, rhinoceros, tigers, leopards, bears, wild dogs, wild hog, deer, buffaloes, and bison (*Bos gaurus*). The *mithan* or *gayāl* (*Bos frontalis*) has been domesticated by the wild tribes, and it is doubtful whether it is now found in Assam in a wild state. Rhinoceros are of three kinds: the large variety (*R. unicornis*), which lives in the swamps that fringe the Brahmaputra; the smaller variety (*sondaicus*), which is occasionally met with in the same locality; and the small two-horned rhinoceros (*sumatrensis*), which is now and again seen in the hills south of the Surmā Valley, though its ordinary habitat is Sumatra, Borneo, and the Malay Peninsula. The species of deer commonly found in the Pro-

vince are the *sāmbar* (*Cervus unicolor*), the *bārasingha* or swamp deer, (*Cervus duvauceli*), the hog deer (*Cervus porcinus*), and the barking-deer (*Cervus muntjac*). Goat-antelopes (*Nemorhaedus bubalinus* and *Cemas goral*) are occasionally met with on the higher hills, but are scarce and shy. Elephants are found in considerable numbers in the Assam Valley and in the lower slopes of the Assam Range. They are also occasionally hunted with success in south Cāchār and in south-eastern Sylhet. Extensive operations have been undertaken by the Government Khedda department; and *mahāls*, or the right of hunting within certain areas not reserved for that department, are leased by auction sale to the highest bidder, who pays a royalty of Rs. 100 on each animal captured. During the period when the Government *kheddas* were working in the Gāro Hills about 400 elephants were annually captured in the Province. Small game include florican, partridges, pheasants, pea- and jungle-fowl, wild geese and ducks, snipe, and hares. Excellent mahseer fishing is also obtained in some of the rivers.

Climate and temperature.

The climate of Assam is characterized by coolness and extreme humidity, the natural result of the great water surface and extensive forests over which evaporation and condensation proceed, and the close proximity of the hill ranges on which an excessive precipitation takes place. Its most distinguishing feature is the copious rainfall between March and May, at a time when precipitation over Upper India is at its minimum. The year is thus roughly divided into two seasons, the cold season and the rains, the hot season of the rest of India being completely absent. From the beginning of November till the end of February the climate is cool and pleasant, and at no period of the year is the heat excessive. Table I, appended to this article (p. 124), shows the mean temperature and diurnal range in January, May, July, and November at Silchar, Sibsāgar, and Dhubri, the only stations in the Province at which observations have been systematically recorded for any considerable period. Except in the height of the rains, the mean temperature is appreciably lower at Sibsāgar than at Dhubri. This is partly due to the heavy fogs, which in the cold season frequently hang over the upper part of the Brahmaputra Valley till a late hour of the day, and prevent the country from being warmed by the rays of the sun. In the Surmā Valley the thermometer in the winter is from five to six degrees higher than in Upper Assam, but during the remainder of the year the climate of Sylhet is fairly cool. Cāchār has a higher

mean temperature for the year than any other District in the Province. On the Shillong plateau the thermometer seldom rises above 80° in the shade at the hottest season of the year, and ice forms on shallow pools in the winter nights. Fogs occur in the Surmā Valley, but not so commonly as in Central and Upper Assam, where at certain seasons of the year they are a serious impediment to steamer traffic. In the Surmā Valley the prevailing wind is from the south-west, except in the months of April and May, when it has a north-north-east direction. In the Brahmaputra Valley the wind is usually from the north-east. During July and August the wind blows from the south-west in Assam proper and from the south-east in Goālpāra District.

Rainfall.

The total amount of rain that falls in Assam during the year is always abundant, but is sometimes unfavourably distributed. In the Surmā Valley, the average rainfall is 157 inches at Sylhet, and 124 at Silchar. To the south of the valley precipitation is less pronounced, but deluges of rain fall on the southern slopes of the Khāsi Hills, and pour down into the valley. At CHERRAPUNJI the annual rainfall averages 458 inches; and 905 inches are said to have fallen in 1861, of which 503 inches were recorded in the months of June and July. Goālpāra and Lakhimpur, at the two ends of the Assam Valley, receive about 115 inches of rain during the year. Kāmrūp, Nowgong, and Darrang are to some extent protected by the high plateaux of the Khāsi Hills, and the rainfall of these Districts ranges from 71 to 77 inches. At Lankā, in the Kapili valley in Nowgong, the average fall is less than 43 inches; but a little to the east the level of the hills that separate the Brahmaputra and Surmā Valley drops, and the rainfall in Sibsāgar rises to 85 inches. The percentage of variability on the average annual fall is 70 in the Surmā and 68 in the Assam Valley. The rainfall in the Hill Districts is ample; but at the few stations at which observations have been recorded its character is largely determined by local conditions, and the average rainfall of this region is probably larger than the figures would suggest. Statistics of monthly rainfall are shown in Table II, appended to this article (p. 124).

Storms and floods.

Storms often occur in the spring months, generally accompanied by high winds and heavy local rainfall, but seldom take the form of destructive cyclones. Two such, however, visited the country at the foot of the Gāro Hills in 1900, destroying everything in their path, and killing forty-four people. The Province has always suffered more from floods than from a

failure of the water-supply. The rainfall, which is everywhere heavy, is in places enormous, and the rivers are frequently unable to carry off the torrents of water suddenly precipitated on their catchment areas. In Mughal times the country in the neighbourhood of the upper portion of the Barāk was protected by an embankment; but at the western end of the Surmā Valley it has always been impossible to restrain the torrential floods, and the whole surface of the plain goes under water. In 1781 a sudden rise of the rivers wrought such utter desolation that, in spite of the efforts of Government, nearly one-third of the population died of famine; but, though inundations occur annually, no such calamities have been known in recent years. In the Assam Valley floods were always one of the chief obstacles to the Muhammadan invaders; and the rivers in Sibsāgar, where there was a large Ahom population, were protected by strong embankments. With the disappearance of the native system of compulsory labour, these works were allowed to fall into disrepair, but steps have recently been taken for the restoration of the more important among them. Except in a few places, where the high bank comes down to the water's edge, the floods of the Brahmaputra render a broad belt of land on either side of the river unfit for ordinary cultivation in the rains, and a considerable amount of local damage is sometimes done by the spill water of its tributaries. The earthquake of 1897 in some way affected the drainage channels and levels of the country; and since that date the floods, especially in Lower Assam, have been of greater duration and intensity. Large tracts, which used formerly to bear rich crops of mustard, now remain too long under water to admit of seed being sown; and special works have been rendered necessary for the protection of GOĀLPĀRA and BARPETĀ, as after the earthquake these towns were found to be below flood-level. The condition of Barpetā in particular has been much improved by drainage works, in which the people co-operated without payment.

Assam has always been subject to earthquakes. In 1607 hills are said to have been rent asunder and swallowed up; and M'Cosh, writing in 1837, reports that, some twenty years before, a village standing on a knoll near Goālpāra completely disappeared, a pool of water appearing in its place. Severe shocks were felt at Silchar in 1869 and 1882, and in 1875 some damage was done to houses in Shillong and Gauhāti. All previous seismic disturbances were, however, completely eclipsed by the earthquake of June 12, 1897, which was the

Earthquakes.

most severe and disastrous of which there is any record in Assam. The station of Shillong was levelled with the ground; and women and children were for several days exposed to drenching rain, with no better shelter than could be obtained from a few tents, tumbledown stables, and sheds without floors or walls. Nearly all masonry buildings in Gauhāti and Sylhet were completely wrecked, and much damage was done in Goālpāra, Nowgong, and Darrang. Two Europeans and 1,540 natives lost their lives, the majority of the latter being killed by landslips in the hills and by the falling in of river banks in Sylhet. Roads and bridges were destroyed, and the drainage of the country was seriously affected by the silting-up of streams and watercourses. The total cost incurred on special repairs to public works necessitated by the earthquake exceeded 37 lakhs, but, even with this sum, it was impossible to restore them to their former condition. Of the damage done to private property it is difficult to form an estimate.

History. Prehistoric movements of the people.

The early history of the Province is very obscure. In the two great river valleys, especially in that of the Surmā, the population contains a certain admixture of Dravidian blood; but, in the main, Assam has drawn its inhabitants from the vast hive of the Mongolian race in Western China, which in very ancient times threw off a series of swarms that afterwards found their way into the frontier lands of India—some to the west, ascending the Tsan-po or upper course of the Brahmaputra, and so along the northern slopes of the Himālayas; some to the south, down the courses of the Chindwin, Irrawaddy, Salween, Menam, and Mekong rivers, peopling Burma, Siam, and the adjoining countries; and some to the south-west, descending the Brahmaputra to Assam and thence far into Bengal. It is with these last that we are here concerned. Their main line of movement was probably along the banks of the Brahmaputra; and as each swarm was forced to yield to the pressure from behind, it either moved on westwards or turned aside into the hills of the Assam Range.

Legends from Hindu sources.

The first mention of the country which we now call Assam is found in the epics and religious legends of Gangetic India, but it is not yet possible to unravel the slender thread of real fact from the tangled skein of fable, invention, and poetical exaggeration. Aryan priests and warriors undoubtedly found their way thither in very early times, but they were wanting in the historical instinct, and have left no trustworthy record behind them. Various places mentioned in the story of Krishna and in the Mahābhārata are now identified with sites

in the Province; but many of them are also claimed, probably with better reason, by other parts of India. Among much that is vague or dubious one fact stands out clearly. There is no doubt that the temple of Saktī, Siva's consort, at Kāmākhya near Gauhāti, was famous in very ancient times, and that it was a great centre of the bloody and sensual form of worship inculcated in the Tantras, which probably had its origin there. The Kālikā Purāna and the Jogini Tantra preserve the names of several kings, whose titles, Dāvana and Asura, betray their aboriginal descent, and who were followed by Naraka, the reputed founder of the ancient and famous city of Prāgjyotishapura, the modern Gauhāti. According to tradition, Naraka ruled from the Karatoyā river to the extreme east of the Brahmaputra Valley, and met his death at the hands of Krishna. He was succeeded by his son Bhagadatta, whose name finds frequent mention in the Mahābhārata as the Lord of Prāgjyotisha and the powerful ally of Duryodhana: he had, it is narrated, a great army of Chīnas and Kirātas, but was defeated and slain by Arjuna on the fatal field of Kurukshetra.

Hiuen Tsiang's description of the country.

Reliable history is first reached in the narrative of the Chinese pilgrim Hiuen Tsiang, who visited the country then known as Kāmarūpa, about A.D. 640, and found it occupied by a race with a dark yellow complexion, small in stature and fierce in appearance, but upright and studious. Their king was Kumāra Bhāskara Varman[1], and they followed the Brāhmanical religion.

Copper-plate inscriptions of tenth to twelfth centuries.

Of the next few centuries our knowledge is very slight; but the gloom is to some extent dispelled by the recent discovery of several inscribed copperplates[2], which appear to have been prepared between the latter part of the tenth and the middle of the twelfth century. The primary object of these inscriptions was to recite the grant of land to Brāhmans; but to us their most interesting part is the preamble, wherein some account is given of the chief by whom each grant was made and of his ancestry. It would seem that, soon after Hiuen Tsiang's departure, the country fell into the hands of a line of aboriginal chiefs who were subsequently converted to Hinduism. Then followed a dynasty founded by one Pralambha, who killed or

[1] Varman is a Kshattriya title, but it is often assumed by aristocratic converts to Hinduism.

[2] Dr. Hoernle's readings of some of these plates, which were obtained by Mr. E. A. Gait and sent to him for decipherment, will be found in the *Journal of the Asiatic Society of Bengal* for 1897.

banished all the members of the previous ruling family. The sixth in descent from him was Bala Varman, in whose reign the first of the copperplate documents above referred to was executed. These kings were worshippers of Siva; their capital was at a place called Hārūppeswara, but they still called themselves Lords of Prāgjyotisha. Early in the eleventh century they were succeeded by a fresh line of kings, who, like their predecessors, claimed descent from the mythical Naraka. The third prince of this family was Ratnapāla, 'the mighty crusher of his enemies, who studded the earth with whitewashed temples and the skies with the smoke of his burnt offerings.' He got much wealth from his copper mines (in Bhutān?); and he erected, it is alleged, pillar monuments of his victories, and built a new capital, which became the home of many wealthy merchants, learned men, priests, and poets. Some time later the country seems to have been conquered, first by the Sen kings of Bengal, and then by their rivals, the well-known Pāl dynasty, whose vassal, Tishya Deva, rebelled about 1133 and was defeated by the Pāl general Vaidyadeva, who in his turn seems to have made himself practically independent. The area ruled by these different kings varied greatly from time to time. Sometimes it stretched as far west as the Karatoyā river and, if their panegyrists can be believed, as far south as the sea-coast, including within its limits the Surmā Valley, Eastern Bengal, and, occasionally, Bhutān; at other times, it did not even comprise the whole of what is now known as the Brahmaputra Valley; sometimes again, and perhaps this was the more usual condition, the country was split up into a number of petty principalities each under its own chief. The Surmā Valley, at any rate, was usually independent of the kings of Kāmarūpa. The early history of this tract is even more obscure than that of the Brahmaputra Valley. We know, however, from copperplate inscriptions that in the first half of the thirteenth century it was ruled by a king named Govinda Deva, and subsequently by his son Isāna Deva; but we possess little information regarding them beyond the fact that they were Hindus.

More recent traditions.

According to the traditions of the Mahāpurushias, Lower Assam and the adjacent part of Bengal subsequently formed a kingdom called Kāmata, and its ruler at the beginning of the fourteenth century was named Durlabh Nārāyan. In the fifteenth century a line of Khen kings rose to power in the same tract of the country. The third and last of this line, Nilāmbar, was overthrown in 1498 by Husain Shāh, the

Muhammadan king of Bengal, who, after a long siege, took the capital, Kāmatapur, by a stratagem.

A few years later Biswa Singh laid the foundation of the Koch kingdom, and, after defeating the local chiefs, built himself a capital in Cooch Behār. The Koch tribe, though now in parts much intermixed with Dravidian stock, was probably at that time purely Mongolian and spoke a language closely allied to those of the Kachāris, Tipperas, Lalungs, Chutiyās, and Gāros. Biswa Singh was succeeded by his son Nar Nārāyan, who extended his kingdom in all directions. He defeated, among others, the chiefs of Dimaruā, Jaintiā, Khairam, Cāchār, and Tippera, and also the Ahom Rājā, whose capital he occupied until pacified by presents, hostages, and a promise of tribute. He met his match, however, in Isa Khān, the Muhammadan chief or Bhuiya of Sonārgaon in Eastern Bengal, who defeated his army and took prisoner his brother Sukladhwaj, to whose military genius he had been mainly indebted for his successes elsewhere. In 1581 the latter's son, Raghu, having rebelled, was given the country east of the Sankosh, Nar Nārāyan retaining for himself the portion west of that river, where he was succeeded, on his death in 1584, by his son Lakshmī Nārāyan. This dismemberment of the kingdom quickly led to its dissolution. But we must first deal with the state of things in other parts of the Brahmaputra Valley.

The Koch kings.

Early in the thirteenth century an event occurred at the eastern extremity of the valley which was destined to change the whole course of Assam history. This was the invasion of the Ahoms, a Shan tribe from the ancient kingdom of Mungmau or Pong, which was situated in the upper portion of the Irrawaddy valley[1]. A quarrel as to the right of succession to the throne is said to have been the cause of the emigration of Sukapha, one of the rival claimants, who, after wandering about the country between the Irrawaddy and the Pātkai mountains for some years, crossed the range in 1228 with a small following and entered the tract which now forms the southern part of Lakhimpur District and the south-east of Sibsāgar. It was at that time inhabited by petty tribes of Bodo affinities (Morans

The Ahoms.

[1] The account here given of the Ahom kings is based mainly on manuscript *buranjis*, or histories written in the Ahom language and character on strips of bark of the *sāchi* or *agar* tree (*Aquilaria Agallocha*). In former times all the leading families had their own *buranjis*, which were written up from time to time; many of these have disappeared, but a number still survive, and translations of these have been prepared.

and Borahis), who were easily subdued: the country round Sadiyā, the northern portion of the head-quarters subdivision of Lakhimpur and the north-eastern part of Sibsāgar as far as the Disāng river, which had previously been governed by a line of Pāl kings, were then under the rule of the Chutiyās, who had established a kingdom of considerable power; while the Kachāris occupied the western part of Sibsāgar, the valley of the Dhansiri, and the greater part of Nowgong. Sukapha, finding his further progress barred, settled down among the Morans and Borahis, who were gradually absorbed into the Ahom community, a process that was accelerated by frequent intermarriages due to the paucity of Ahom women. In this way, aided probably by fresh streams of immigration from Pong, the Ahoms increased rapidly in numbers and power. Early in the fourteenth century there is a vague reference to a war with a Rājā of Kāmata, who, it is said, was forced to sue for peace. A few years later the Ahoms become involved in a war with the Chutiyās. In 1376 the latter pretended to make peace, and then treacherously murdered the Ahom king, Sutupha, at a regatta on the Safrai river, held to celebrate the cessation of hostilities. This led to a renewal of the war; the Chutiyās were worsted, but their final overthrow did not take place until 1523, when Suhunmung, otherwise known as the Dihingia Rājā, who reigned from 1497 to 1539, utterly defeated them with heavy slaughter and annexed their country, which he placed in charge of an Ahom viceroy called the Sadiyā-khowa Gohain. A number of Ahoms from Gargaon were settled at Sadiyā, while the leading families of the Chutiyās were deported to a place not far from Tezpur, and many of their artisans were brought to the Ahom capital. Meanwhile, there had been numerous expeditions against various Nāgā tribes, which were generally successful; and in 1490 the first war occurred with the Kachāris, by whom the Ahoms were defeated on the banks of the Dikho river. This set-back was, however, only temporary; and little more than thirty years afterwards we find the Dihingia Rājā, whose victory over the Chutiyās has just been mentioned, fighting with the Kachāris on the bank of the Dhansiri. The Kachāris won a few minor successes, but in the end they were utterly vanquished. Their king was deposed and a new ruler named Detsung installed in his place. In 1536 hostilities again broke out; Detsung was taken and killed; his capital at Dimāpur was sacked; and the Kachāris were shorn of all their possessions in the valley of the Dhansiri and north of the Kalang river in Nowgong.

The Dihingia Rājā, like so many Ahom kings, met his death at the hands of an assassin, who was instigated, it is said, by his own son. His reign is memorable, not only for the extirpation of Chutiyā and Kachāri rule from the valley of the Brahmaputra and (it is alleged) for the acknowledgement of his supremacy by the Koch king Biswa Singh, but also for the repulse of two Muhammadan expeditions. The second, of these, in 1532, was led by a commander named Turbak, who worsted the Ahoms in several engagements, but was at last utterly defeated on the bank of the Bhareli river. He himself was slain with large numbers of his followers, and many were taken prisoners and settled in the Ahom country: these are reputed to be the ancestors of the Moriās. The use of fire-arms by the Ahoms dates from the close of this war. These two expeditions, though the first in which the Muhammadans are recorded to have come into collision with the Ahoms, were not by any means the earliest invasions by them of country now included within the Province of Assam. In 1384 they had conquered and annexed Sylhet, excluding the submontane tracts in the north and south, which were held by Jaintiās and Tipperas, and at an even earlier date they had begun to harry the lower portion of the Brahmaputra Valley; but here, though their superior arms and discipline generally brought them a temporary success, their expeditions all ended in failure, induced by disease, ignorance of the country, the difficulty of communications, especially during the rainy season, and the impossibility of bringing up reinforcements to repair losses. Muhammadan invasions.

The power of the Ahoms continued to grow and their dominions to expand, and there was almost constant warfare between them and one or other of their neighbours—Narās[1], Nāgās, Kachāris, and Koch. They were nearly always successful; but they sustained a crushing defeat at the hands of the Koch king, Nar Nārāyan, whose capture of the Ahom capital has already been referred to. Their recovery from this reverse was, however, extraordinarily rapid, and a fresh turn in the wheel of fortune soon gave them their revenge. Expansion of the Ahom dominions.

Nar Nārāyan was succeeded in the Western Koch kingdom by his son Lakshmī Nārāyan, who soon became embroiled with Parīkshit, the son of Raghu and his successor in the eastern kingdom. Being unable to hold his own, Lakshmī Nārāyan invoked the aid of the Muhammadans, who took Koch affairs after Nar Nārāyan's death.

[1] The Narās occupied the country round Mogaung on the other side of the Pātkai. They are commonly regarded as Shans, but Ney Elias thought that they included in their composition a large aboriginal element.

Parīkshit's fort at Dhubri and soon afterwards invested his capital at Barnagar on the Manās. Parīkshit held out there for a time, but was at last forced to surrender and was sent a prisoner to Delhi, while his brother Bali Nārāyan fled to the Ahom king, Pratāp Singh, who refused to give him up.

Fresh war between the Ahoms and the Muhammadans.

The Muhammadans, therefore, invaded the Ahom country with a force of from 10,000 to 12,000 horse and foot and 400 large ships. They gained a victory near the mouth of the Bhareli river, but were soon afterwards annihilated in a night attack. Pratāp Singh thereupon installed Bali Nārāyan as successor to Parīkshit, and advanced and took Pandu near Gauhāti, which he fortified. He next laid siege to Hājo, but was driven back. The war dragged on in Lower Assam for some years with varying success, but in 1637 the governor of Dacca determined to take more vigorous measures, and he dispatched what was practically a new army. This measure met with immediate success. The Ahoms were driven out of Kāmrūp, Bali Nārāyan was killed, and a treaty was made by which the Barnadī was taken as the boundary between Ahom and Muhammadan territory.

Ahom conquest of Lower Assam.

The Koch kings continued to rule west of the Sankosh as vassals of the Muhammadans; but when the Mughal emperor Shāh Jahān fell sick in 1658, Prān Nārāyan, who was then on the throne, took advantage of the confusion ensuing on the wars of succession to throw off his allegiance, and defeated the Muhammadan *faujdār* of Goālpāra. The latter retreated to Gauhāti, but was driven thence by the Ahom king, Jayadhwaj Singh. Prān Nārāyan proposed to the latter a friendly division of Lower Assam, but his overtures were rejected and he was soon compelled to retreat beyond the Sankosh. The whole of the Brahmaputra Valley thus fell into the hands of the Ahoms.

Mīr Jumla's invasion.

When order was restored in Bengal, and Mīr Jumla became governor at Dacca, he first attacked and defeated Prān Nārāyan, and then advanced against the Ahoms, with an army, according to their writers, of 12,000 horse and 30,000 foot and a powerful fleet. The Ahoms were worsted on both land and water, and were gradually driven back. In spite of the great difficulty of locomotion due to the numerous watercourses and the vast expanse of dense jungle, Mīr Jumla marched steadily up the south bank of the Brahmaputra, his fleet keeping pace with his army, and at last occupied Gargaon, the Ahom capital, where he halted for the wet season, which was now close at hand. The rains set in with unexampled severity, and the country

soon became a quagmire. Supplies were hard to get, and the Ahoms harassed the Mughals by repeated night attacks and destroyed some outlying garrisons and isolated detachments. As the rains progressed, the position of the Muhammadans became more and more trying; and to the terrors of a persistent but unseen enemy were added severe epidemics of disease, especially dysentery. Mīr Jumla himself did not escape. Broken in health, he found himself unable to resist the clamour of his troops to be led back to Bengal; early in the cold season a treaty was patched up, and he hurried back to Dacca, where he died soon afterwards. The Muhammadan historians have left on record an interesting account of their opponents. Their resources were considerable; and in the course of the expedition the Musalmāns captured more than 1,000 war sloops from the enemy, many of which could accommodate from three to four score sailors. They also took nearly 700 guns, some of them of considerable size. Extensive fortifications had been erected on both sides of the river near Tezpur, and the country between Kaliābar and Gargaon was said to be well cultivated and adorned with gardens and orchards. Gargaon itself was a town of considerable size, and the historian waxes enthusiastic over the splendours of the Rājā's palace. The genuine Ahoms are described as keen and fearless soldiers; but their number was not large, and the Kalitā levies were of very small account. The Ahoms lost no time in retaking the country they had lost; and two years later we find them in undisputed possession of the whole of Kāmrūp, and the advance guard of the Mughals located at Rangāmāti in Goālpāra[1]. For a time, however, internal troubles and a long series of conspiracies threatened to do what external aggression had failed to effect; and in the brief space of eleven years there were no less than seven Ahom kings, not one of whom died a natural death. The Muhammadans took advantage of these disturbances to recover possession of Gauhāti, but they were finally driven out in the reign of Gadadhar Singh, who ascended the throne in 1681.

Ahom wars with Kachāris and Jaintiās.

The next king, Rudra Singh, being free from all fear of Muhammadan invasion and secure in his possession of Kāmrūp, began to extend his kingdom in other directions. He took the

[1] Not the least interesting of the relics of this period is a cannon now at Dīkom bearing two inscriptions, the one in Persian stating that it had been made for use in the conquest of Assam, and the other in Sanskrit recording the fact that the Ahoms had taken it from the Muhammadans in battle.

south of Nowgong from the Kachāris and occupied Maibang in the North Cāchār Hills, whither they had removed their capital on being ousted from Dimāpur. He also contemplated an invasion of their dominions in the Cāchār plains, which one of their Rājās had obtained as a gift from a Tippera king on the occasion of his marriage with the latter's daughter; but his troops suffered so much from sickness during the rainy season that he was obliged to desist. Meanwhile, the Kachāri king, Tamradhwaj, had invoked the aid of the Jaintiās, a section of the Khāsi tribe, inhabiting the eastern part of the Khāsi and Jaintiā Hills, who at this time also held the country between the foot of the hills and the Surmā river, and whose king, Rām Singh, had his head-quarters at Jaintiāpur in the same tract. On learning of the departure of the Ahoms, Tamradhwaj informed Rām Singh that his help was no longer needed, but the latter treacherously seized him and annexed his territory. Tamradhwaj managed to send word to Rudra Singh begging for help, and the latter dispatched two armies to Jaintiāpur, one across the Jaintiā Hills and the other through the Kachāri country. Both reached their destination; Jaintiāpur was taken without difficulty; but when Rudra Singh's intention to bring them permanently under his yoke became known, the Jaintiās rose to a man, and his generals, finding their position untenable, were forced to beat a retreat.

Conversion of Ahoms to Hinduism.

Rudra Singh's reign is memorable for the final triumph of Hinduism over the national religion of the Ahoms[1]. Many of his predecessors had taken Hindu, as well as Ahom, names, and had shown great respect for the Brāhmans; but Rudra Singh was the first to announce publicly his intention to become the disciple of a Hindu priest. His son and successor, Sib Singh, was completely in the hands of Brāhmans of the Sākta sect; and he allowed his wife, Phuleswari, at their instigation, to insult the Sūdra *mahant* of the Vaishnava sect of Moamarias[2], who had now become very numerous, by causing

[1] The Ahoms were not mere Animists of the type commonly found among the aboriginal tribes of India, but had a regular pantheon of which the leading members were, in later times at least, identified with Hindu gods and goddesses. An account of the Ahom story of the Creation will be found in a paper contributed by Mr. E. A. Gait to the *Journal of the Asiatic Society of Bengal* for 1894, and a translation of their cosmogony, with the Ahom text, is given by Dr. G. A. Grierson in the *Journal of the Royal Asiatic Society* for 1904.

[2] The Moamarias are a Vaishnava sect, most of whose members are drawn from the lower Hindu castes and are residents of Upper Assam. Three explanations of the origin of the name are current. According to

his forehead to be smeared with the blood of an animal that had been sacrificed to Durgā. The common people soon followed the lead of their king; and in a few years the Deodhais and Bailongs, the tribal priests and astrologers, alone remained true to the ancient faith of the Ahoms. The change was disastrous: it involved the loss of the old martial spirit and pride of race with which the Ahoms had till then been animated; their patriotic feelings thenceforth became more and more subordinated to sectarian animosities and internal dissensions and intrigues, and their power soon began to decay. In 1766 we read, for the first time, of Ahom nobles declining the proffered command of a military expedition.

Moamaria rebellions and consequent anarchy.

In 1769, soon after the accession of Lakshmī Singh, the Vaishnava Moamarias, enraged by fresh insults, rose in rebellion, seized the person of the king, and placed the son of a Matak[1] chief on the throne. For a time the rebels seemed to have overborne all opposition, but the report that their leader was contemplating the execution of all the old officers of state incited the royalists to renewed efforts. The Moamaria commander was killed in a night attack, and many of his chief supporters were put to death. Deprived of their leaders, the rebels offered but a feeble resistance, and they were easily dispersed. Lakshmī Singh died in 1780, and the accession of his son, Gaurināth Singh, was the signal for renewed persecutions. These led to fresh risings; and at last, in 1786, the rebels defeated the royal troops in several encounters and took the capital by storm. Gaurināth fled to Gauhāti; but resistance was continued by one of his ministers, known as the Bura Gohain, and for several years the war dragged on with varying success. A general state of anarchy supervened; the countryside was devastated by bands of armed men, and petty chiefs in all directions began to proclaim themselves independent. Among the latter was Krishna Nārāyan, a descendant of the Koch kings, who seized Darrang and the northern part of Kāmrūp and threatened Gauhāti. The Moamarias also were advancing nearer and nearer.

one, the original founder lived near the Moamari *bīl* in Nowgong; according to another, the people were called Moamarias in contempt, because they were in the habit of catching and eating the *moa* fish; while others say that the original Gosain Aniruddha convinced the Ahom king of the truth of the new religion by a display of magic *maya*.

[1] The Mataks were the inhabitants of Lakhimpur, and were so called because the raiding Singphos found them *matak* or 'strong,' in contradistinction to the *mullong* or 'weak' people farther east.

British intervention in aid of the Ahom king.

Gaurināth now sought aid from the British, who had succeeded to the Mughals in Sylhet and Goālpāra, and urged that his plight was due largely to the fact that Krishna Nārāyan had been allowed to recruit men for his army in Rangpur District. Lord Cornwallis recognized the obligation, and in September, 1792, sent Captain Welsh with a small force to the Ahom king's relief. A little below Gauhāti he was met by Gaurināth, who had fled from the city before a mob of Doms led by a Bairāgi. Welsh had no difficulty in driving them out, and he then crossed the Brahmaputra with 250 sepoys and defeated Krishna Nārāyan's army of 3,000 men. After some further reverses the latter surrendered, and his Bengal clubmen were deported. In his efforts to conciliate Gaurināth's numerous enemies, Welsh found himself thwarted by the cruel and sanguinary conduct of the Rājā, and by the intrigues and covert opposition of some of his ministers. He replaced the latter by others of a more humane disposition, caused a general amnesty to be proclaimed, and took such other steps as seemed needed to restore confidence and ensure good government. He spent the rainy season of 1793 at Gauhāti, and in January, 1794, after pacifying Mangaldai and Nowgong, advanced to Kaliābar. Jorhāt, where the Bura Gohain was still holding out against the Moamarias, was relieved by a small force; and a decisive victory was gained about 12 miles from Rangpur, which was occupied in March. Sir John Shore had now succeeded Lord Cornwallis as Governor-General, and one of his first acts was to recall Captain Welsh, in spite of the vigorous protests of the Ahom king. The latter, when left once more to his own devices, dismissed most of the officials who had been appointed on Welsh's recommendation, renewed the persecution of the Moamarias, and wreaked his vengeance on his old enemies who had made their submission under a promise of pardon; and for a time it seemed likely that Assam would once more relapse into anarchy. This was prevented by the energy of the Bura Gohain, who organized a body of troops disciplined on the English model, and, with their aid, the Moamarias and other malcontents were held in check.

Shortly after the accession of Chandra Kanta[1], in 1810, the

[1] Gaurināth was followed by a very distant connexion named Kamaleswar, a descendant of Gadadhar Singh; and Chandra Kanta, the next king, was Kamaleswar's brother. In the early days of Ahom rule the succession devolved from father to son with great regularity; but in later times brothers often succeeded to the exclusion of sons, and sometimes, as in the

Ahom governor at Gauhāti fell into disgrace, and fled for safety to Bengal. After seeking in vain the assistance of the British, he gained the friendship of the Burman envoy then at Calcutta and went with him to Amarapura, where he persuaded the Burman king to send an expedition to Assam. In 1816-7 an army of 8,000 men was dispatched from Burma, which, having crossed the Pātkai and gained fresh adherents among the hill chiefs, entered Assam, occupied the whole country as far as Jorhāt, and reinstated the Gauhāti governor. The force then returned to Burma. They had barely departed when fresh dissensions took place; the governor, who had invoked the aid of the Burmans, was assassinated; Chandra Kanta was deposed, and Purandar Singh, a direct descendant of Rājā Rājeswar Singh, was installed in his place. The friends of the late governor appealed to the Burmans, who once more appeared on the scene and reinstated Chandra Kanta; but on this occasion it soon became clear that they meant to stay. Chandra Kanta made a vain effort to throw off their yoke and fled to British territory, where Purandar Singh had frequently taken refuge. The Burmans during their occupation of the country treated the unfortunate inhabitants with extreme barbarity. The villages were plundered and burnt, and the inhabitants were driven into the jungle to live as best they could.

The Burmans conquer the Ahoms.

The gradual decline of the Ahom power had caused a relaxation of their pressure on the Kachāri kings, whose capital was now at Khāspur in the plains of Cāchār; but the latter soon found a fresh enemy on their eastern frontier, where the Manipurīs became so threatening that, from 1817 onwards, constant appeals for help were made to the British. These were rejected until early in 1824, when intelligence of a projected invasion of Cāchār and Jaintiā by the Burmans induced the British Government, which had received great provocation from Burma in other quarters, to intervene. The first collision with Burman troops occurred on the Cāchār frontier; but the scene of the main operations in Assam was in the Brahmaputra Valley, where a British force of 3,000 men advanced without

They are driven out by the British.

case of Kamaleswar, even very distant relations did so. Much depended on the wishes of the previous king, much on the action of the great nobles, with whom, in theory at least, the choice seems to have rested, and much on the personal influence of the rival candidates. The one essential qualification was that they must be of the royal blood. The person of the monarch was sacred and any marked blemish, even the scar of a carbuncle, operated as a disqualification. Hence arose the practice, often followed by the Ahom kings, of mutilating all likely rivals. Mutilation was usually effected by slitting the ear.

much opposition as far as Kaliābar. On the approach of the rainy season the troops returned to Gauhāti, and the Burmans reoccupied Nowgong, where they committed terrible atrocities on the helpless inhabitants. Many were put to death and many fled for their lives into the hills to the south; of the latter, the majority died of starvation, and only a small remnant lived to reach the plains of the Surmā Valley. When the rains were over, the British again advanced; and the Burmans were driven out of the Province after a few fainthearted and ineffectual attempts at resistance, but in the course of their retreat they carried off as slaves upwards of 30,000 Assamese.

Incorporation of Assam in British dominions. Gradual expansion of Province.

By the Treaty of Yandabo in 1826 the Burmans ceded Assam to the East India Company, and Mr. Scott, the Commissioner of Rangpur, was appointed to administer the country. The Moamarias in the south of Lakhimpur District were left under their own ruler, the Bor Senāpati; and the Sadiyā-khowa Gohain or Khamti chief of Sadiyā, who had dispossessed the Ahoms there during the Moamaria rebellions, was confirmed as the Company's feudatory in that tract, while, in 1833, the rest of Lakhimpur District and Sibsāgar were restored to Purandar Singh. These arrangements, however, did not last long. In 1838 Purandar Singh declared himself unable to carry on the administration, and his territory was taken over. In 1835 the Sadiyā-khowa Gohain was removed from his post; but the local Khamti chiefs were allowed to manage their own internal affairs till 1839, when, without any warning, they made a night attack on the garrison of Sadiyā, and killed Colonel White, the officer in command, and a number of his sepoys. The Khamtis were then deported to places lower down the river, and the power of their chiefs was finally extinguished. In 1842 the Bor Senāpati died, and on his son declining to accept the terms of settlement offered to him, his country also was annexed.

In Cāchār the Rājā was replaced on the throne, but was soon forced to relinquish the northern portion of his domains to a rebel named Tula Rām. The Rājā was assassinated in 1830 and, in the absence of any lawful heir, the Cāchār plains were annexed to British territory. Five years later Tula Rām ceded a considerable tract, and the rest of the country was taken over soon after his death in 1850, as his sons had proved unable to manage it. In 1835 the Rājā of Jaintiā was dispossessed of his estate in the plains, in consequence of the repeated abduction of British subjects who were sacrificed to Kālī, the tutelary goddess of his family. He then declared

himself unwilling to continue in possession of his hill territory, over which he had but little control, and it also was included in the Company's dominions. The Khāsi Hills to the west were conquered in 1833, as the result of an attack made on a party engaged in constructing a road through the hills; but the people were left in a state of quasi-independence under their own chiefs, with the exception of a few villages which were acquired for special reasons, either at the time of the conquest or at some subsequent date: among the latter may be mentioned the site of Shillong, the capital of the Province as now constituted. The occupation of the Nāgā Hills has been a gradual process, due to the necessity of protecting British subjects from Nāgā raids. It commenced in 1866, when a frontier District was formed, with head-quarters at Sāmaguting; and the last addition was made in 1904, when the Eastern Angāmī country was formally annexed. Theoretically, the Gāro Hills always formed part of Goālpāra District; but for many years British control over the Gāros was limited to ineffectual efforts to suppress their constant raids on the adjoining plains, by means of punitive expeditions or by forbidding them to trade in the plains. In 1869 the tract was formed into a separate District, with head-quarters at Turā, and order was instantly established in all but the more remote villages. The inhabitants of the latter, having perpetrated fresh raids, were brought under subjection in 1872–3 with the aid of a few small detachments of police, who met with no serious opposition. Prior to 1890, the history of British relations with the Lushais was one of constant raids by the latter, followed by infructuous punitive expeditions. In that year, after one of these expeditions, it was decided to try the expedient of establishing military outposts in their midst. A treacherous attack on two of these outposts led to fresh operations and to the permanent annexation of the Lushai Hills, which are now in charge of a Superintendent, with head-quarters at Aijal.

Manipur State.

The State of Manipur has a fairly ancient history; but the present régime dates only from 1714, when the reigning chief adopted Hinduism, which has now gained a remarkably strong hold on the people. By the Treaty of Yandabo, the Burmans agreed to the restoration to the throne of Rājā Gambhīr Singh, whom they had ousted. He and his descendants enjoyed a large measure of independence, and the British Government rarely interfered in local affairs except in the case of risings or disputes regarding the succession. In 1890, in the course of

one of these risings, the Mahārājā was driven from his palace and abdicated in favour of the Jubrāj, but he subsequently repudiated his abdication. The Government of India decided to confirm the Jubrāj as Rājā, but directed the Chief Commissioner to arrest and deport the Senāpati, who had been the ringleader in the plot. He proceeded to Manipur and called on the Senāpati to surrender, but the latter refused and resisted the troops sent to seize him. The Chief Commissioner and four other officers were then induced, under a promise of safe-conduct, to attend, alone and unarmed, a *darbār* in the palace. The discussion was fruitless, and they started to return, but a crowd of Manipurīs closed in on them and two of them were wounded with spears. One died of his wound, and all the other officers, after a short detention, were cruelly murdered. This led to a military expedition. Manipur was occupied by British troops; the ringleaders were punished; the new Rājā was deposed, and a scion of a collateral line was raised to the throne. Since this time a large measure of control has been vested in the resident British officer, who is now designated Political Agent and Superintendent of the State.

Chief Commissioners of Assam.

Until 1874, Assam was administered as part of Bengal, but in that year it was formed into a separate Province under a Chief Commissioner. The officers who have held this appointment since that date are as follows:—

Colonel R. H. Keatinge	1874
Sir Steuart Bayley	1878
Mr. (afterwards Sir) Charles Elliott	1881
Mr. (afterwards Sir) William Ward	1885 Offg.
Mr. (afterwards Sir) Dennis Fitzpatrick	1887
Mr. (afterwards Sir) James Westland	1889
Mr. J. W. Quinton	1889
Sir William Ward	1891
Mr. (afterwards Sir) Henry Cotton	1896
Mr. (afterwards Sir) J. B. Fuller	1902

NOTE.—Officiating appointments for less than six months are omitted.

Archaeology.

Assam is somewhat destitute of archaeological remains of interest. The natives of the Province have little aptitude for handicrafts, and many of the temples that exist were probably constructed by artisans from Hindustān. The shrine of Shāh Jalāl, situated in a mosque at Sylhet, is still in an excellent state of preservation, and there are some interesting ruins at JAINTIĀPUR. Kāmrūp has many temples, but most of them are small and have fallen into disrepair, the two best known being the temple of KĀMĀKHYA on Nilāchal hill near Gauhāti, and the temple of Hayagriva Mādhab at HĀJO. There are

also the remains of an interesting stone bridge in the Silā Sindurighopā *mauza*, said to have been constructed by Bakhtyār Khiljī when he invaded Assam at the beginning of the thirteenth century. Near Tezpur are the ruins of what must have been a magnificent temple; but not one stone is left standing upon another, and its builder and designer are alike unknown. DIMĀPUR, in the extreme south-western corner of Sibsāgar District, was once the capital of the Kachāri dynasty, and was evidently a place of considerable importance, though it is now situated in the midst of an enormous forest. Sibsāgar has numerous temples built by the Ahom kings. They are made of thin bricks of excellent quality, and are generally ornamented with bas-reliefs; but the fact that figures of camels not unfrequently appear suggests that they were erected under the direction of foreign artisans, as camels must always have been very scarce in a damp and marshy country like Assam. These temples were generally built on the side of large tanks, whose construction must have entailed an enormous amount of labour. The largest tank, at Sibsāgar, covers an area of 114 acres. Immense tanks, with temples on their banks, were also constructed at Gaurisāgar, Rudrasāgar, and Jaysāgar, all within a few miles of the Sibsāgar tank. At Gargaon near NĀZIRĀ are the ruins of one of the Ahom capitals. That the native rulers of Assam extended their frontiers right up to the Himālayas is shown by the remains of a fort at Bhālukpāng in the gorge of the Bhareli, and of two large forts some distance north of Sadiyā. Another interesting ruin near that place is the small temple at which a human victim was annually offered for many centuries by the Çhutiyā priests. Scattered about the valley are the remains of great roads and fortifications which evidently protected the capitals of some local prince. The Baidargarh in Kāmrūp, which is said to have been constructed by king Arimatta about the thirteenth century, and his son Jangal's fort in Nowgong, deserve special mention, as also the remains of extensive earthworks at Pratāpgarh, near Bishnāth, in Darrang District.

Population. General distribution.

The population of Assam, including the State of Manipur, returned at the Census of 1901, amounted to 6,126,343 persons, living in 19 towns and 22,326 villages. It can be most conveniently considered with reference to the three natural divisions into which the Province falls.

Over the greater part of the Surmā Valley there is no longer any scarcity of population. In the Cāchār plains the density is only 201 persons per square mile; but the country is much

broken by hills and marshes, and of recent years it has become necessary to throw open considerable areas of 'reserved' forest to meet the demand for cultivable land. The neighbouring District of Sylhet is fully peopled, and in the Habiganj subdivision the density rises to 538 persons per square mile, which for a purely rural population must be considered high. In the Brahmaputra Valley the condition of affairs is very different. Though three times the size of the valley of the Surmā, it supports a slightly smaller population, and the density in its Districts varies from 68 persons per square mile in Nowgong to 153 in Kāmrūp. A considerable portion of the unsettled area consists of steep jungle-covered hills, and of marshes that could only grow cold-season crops or the longest-stemmed varieties of rice; but much good land awaits settlement, and there is probably room for two or three million more inhabitants. There are, however, places where the population is already fairly dense, and in certain rural tracts in the centre of Kāmrūp and Sibsāgar it exceeds 600 persons per square mile. The Hill Districts are very sparsely peopled; but the area of land suited for permanent cultivation is small, and large tracts of waste are required for the support of tribes that live by shifting cultivation.

Towns and villages. The population of Assam is almost entirely rural. Excluding Manipur, less than 2 per cent. of the people enumerated in 1901 were living in urban areas. The largest towns are SYLHET (13,893), GAUHĀTI (11,661), DIBRUGARH (11,227), SILCHAR (9,256), BARPETĀ (8,747), and SHILLONG, the headquarters of the Administration (8,384). Many of the towns are little more than large villages, and the average population of eighteen places dignified with the name was only 6,315. IMPHAL, the capital of Manipur, had a population of 67,093; but the rural character of the place is illustrated by the fact that more than half of the working males residing there were agriculturists by profession. Except in the Nāgā, North Cāchār, and Lushai Hills, the boundaries of a village are not clearly defined, and the cottages are scattered over a considerable area. This tendency is particularly marked in the Assam Valley. Rice is grown on broad plains, often several miles in length, dotted over with clumps of bamboos and fruit trees, in which are buried the houses of the cultivators. A village, in the sense of a compact block of houses set in the midst of its fields at a considerable distance from any other centre of population, is the exception rather than the rule in the plains of Assam; and for census purposes a village was taken to be the

area so designated by the cadastral survey. In many cases, however, the cadastral village is little more than a tract of land which can conveniently be surveyed on one sheet of the map, and this fact has to be borne in mind when examining the statistics showing their average size. In Sylhet there is so little high land that the people are compelled to live in fairly close proximity, but all over the Province there is a marked preference for small hamlets. In 1901, 56 per cent. of the population were living in villages of less than 500 inhabitants; 38 per cent. in those ranging from 500 to 2,000, and less than 5 per cent. in those containing from 2,000 to 5,000.

Growth of population. The first regular Census, which was taken in 1872, disclosed a population of 4,150,769. Manipur and the Lushai Hills were not included, and the figures for the Hill Districts were only estimates. In 1881 the population, including Manipur, was 5,128,862; and in the plains alone there was an increase of over 18 per cent., a fact which threw grave doubts on the accuracy of the former enumeration. In 1891 Manipur again dropped out, the census schedules having been destroyed in the rising, but the Lushai Hills appeared for the first time, and the population was returned at 5,477,302. The population of the plains increased by nearly 11 per cent., but part of this increase was no doubt due to the greater accuracy of the enumeration in 1891. In the last intercensal period the increase was 649,041, or 12 per cent., but this was largely due to the inclusion of the figures for Manipur and the South Lushai Hills; and in the plains the increase was less than 6 per cent. The year 1897 was very unhealthy, and in Central and Lower Assam an abnormal mortality was not confined to that year alone. The population of Kāmrūp decreased by over 7 per cent.; and, though there was an increase in Darrang, it was entirely due to immigration, and the indigenous inhabitants are believed to have decreased by 8 per cent. The lowest depth was, however, reached in Nowgong, where the people were more than decimated by a peculiarly malignant form of malarial fever known as *kalā azār*. The population of the District as a whole fell by nearly one-fourth, and it was calculated that the indigenous inhabitants had decreased by over 30 per cent. In Upper Assam there was a satisfactory growth of the indigenous population, and an enormous development of immigration during the decade. The population of Sibsāgar increased by nearly one-fourth, and that of Lakhimpur by almost a half. The best indication of the natural growth of the people is, however, obtained by excluding the figures for Manipur and

the Lushai Hills, and comparing the figures for those born and enumerated in the Province in 1891 and 1901. Among this class it appears that the increase during the last intercensal period was only a little more than one per cent.

Immigrants. There was, however, a great growth of the immigrant population, which increased by more than one-half, and in 1901 exceeded three-quarters of a million, or nearly 13 per cent. of the total population of the Province. The great majority of these foreigners are coolies brought up to the tea gardens, though a certain amount of movement takes place across the frontier where Assam marches with Bengal. More than half a million people came from that Province, a quarter of a million of whom had been born in the Division of Chotā Nāgpur. About 109,000 persons came from the United Provinces, and 84,000 from the Central Provinces. The preponderance of the foreign-born element in the population was most pronounced in Lakhimpur, where they formed 41 per cent. of the whole, and in Darrang and Sibsāgar (25 per cent.). Cāchār (plains) was close behind, with 24 per cent. In Sylhet, on the other hand, though the total number of foreigners was considerable, they formed only 7 per cent. of the population. There is very little emigration, and only 51,000 persons born in Assam were found in other parts of India. The great majority of these persons had merely crossed the frontier from Goālpāra and Sylhet into Bengal.

Age. Little reliance can be placed upon the age statistics, as only a small proportion of the population have even an approximate idea of the number of years which they have lived, and, though the mistakes made tend to some extent to neutralize one another, there is a marked tendency to select multiples of five. Inaccurate though the figures are, they show that the exceptional unhealthiness which prevailed between 1891 and 1901 affected the fecundity of the people; and the decrease in the proportion of children was especially pronounced in Districts like Nowgong and the Khāsi Hills, where the death-rate was exceptionally high. The most prolific section of the people includes the animistic tribes, and it seems possible that the system of early marriage may have a prejudicial effect upon the reproductive powers of Hindu women.

Vital statistics and prevalent diseases. The registration of vital statistics is compulsory only on tea gardens, and in the District and subdivisional head-quarters stations in the plains (population in 1901, 765,000); but attempts are made to collect information in all the plains Districts and in a small portion of the hills. In Goālpāra

the returns are submitted in writing by the village *panchāyats* and are fairly correct. In the Surmā Valley vital statistics are reported by the paid village *chaukīdārs*, but their accuracy leaves much to be desired. In Assam proper they are collected by the *gaonburas* or village headmen, and are extremely incomplete. The mean annual birth-rate registered in the plains Districts during the five years ending with 1902 was only 33 per 1,000, varying from 42 in Goālpāra, where public health had been bad, to 25 in Sibsāgar and Lakhimpur, where it had been good. The mean death-rate registered was 30 per 1,000, varying from 41 in Nowgong to 21 in Sibsāgar. The returns have thus but little absolute value, though, as the amount of error is fairly constant, they afford some clue to the comparative unhealthiness of different years. The sanitary conditions of Assam are far from satisfactory. The tract at the foot of the hills and the valleys running up into them are excessively malarious; and as the Province practically consists of two valleys with the intervening range, the proportion of this feverish *tarai* land is higher than in other parts of India. On the other hand, the open country is fairly healthy, and though the climate is damp it is also cool. The most prevalent diseases are fever, bowel complaints, pulmonary affections, cholera, worms, small-pox, various cutaneous disorders, and, in some localities, goitre. Leprosy is by no means uncommon, and in 1901 more than 5,000 persons were said to be afflicted with this disease. The birth and death rates in 1881 and subsequent years, and the mortality ascribed to the principal diseases, are shown in the following table:—

	Population under registration.	Ratio of registered births per 1,000.	Ratio of registered deaths per 1,000.	Deaths per 1,000 from			
				Cholera.	Small-pox.	Fever.	Bowel complaints.
1881	4,483,705*	19	16	1	1	9	2
1891	5,021,084	29	30	5	...	15	3
1901	5,275,706	34	28	1	1	16	2
1903	5,275,706	36	27	2	...	14	3

* This is the population among whom deaths were registered. Births were registered among a population of only 2,225,271.

These rates do not represent the actual mortality due to these different ailments, but give a fairly correct idea of their comparative importance.

The most important factor in the medical history of the Province during the last twenty years has been *kalā azār*. This disease was known as far back as 1869, when an intense *Kalā azār* and plague.

form of malarial fever was reported to be inducing a high rate of mortality in the low and densely wooded Gāro Hills; but it first came into prominence in 1883, when it entered that portion of Goālpāra District which lies south of the Brahmaputra. In 1888 it spread to Kāmrūp, and thence to Nowgong and to Mangaldai on the north bank of the Brahmaputra, and of recent years it has reached Sylhet. The virulence of the epidemic is now gradually abating, and it has as yet failed to effect a lodgement in Upper Assam, but it has been the cause of terrible mortality in the Districts it attacked. Between 1881 and 1891 the population of the Goālpāra subdivision decreased by 18 per cent.; and the population recorded in Kāmrūp in 1891 was estimated to have been less by 75,000 people than it would have been had there been no deaths from *kalā azār*. During the next decade the population of Kāmrūp decreased by 7 per cent., that of the Mangaldai subdivision of Darrang by 9 per cent., of Nowgong District by 25 per cent., and of the North Sylhet subdivision by 4 per cent.; and the excessive mortality indicated by these figures was, at any rate in the Assam Valley, chiefly due to this disease. Its nature is still a cause of speculation to the medical world. In all essentials it seemed to be a form of malarial fever, but the suggestion that malarial fever could be infectious was till recently opposed to all accepted theories on the subject. Subsequently, it was thought that *kalā azār* was only an acute form of malarial poisoning, the difference between it and ordinary fever lying in the rapidity with which it produces a condition of severe cachexia, the small proportion of recoveries, and the ease with which it can be communicated from the sick to the healthy. Quite recently, the malarial theory of origin has been again assailed, and the whole question is still involved in uncertainty. Persons attacked seldom died in less than three months, and often lingered for two years; and isolation and segregation were thus impossible, once the disease had obtained a foothold. Plague did not appear in Assam till the rainy season of 1903, when it broke out among the foreign grain merchants in Dibrugarh. The disease was quickly stamped out, and only 28 deaths occurred. The age statistics recorded at the Census and the vital statistics supplied by the collecting agency are so inaccurate that it is impossible to place any reliance on the recorded death-rate for infants under one year of age. It is, however, generally supposed to be about 218 per mille.

Sex. Every Census in Assam has disclosed a deficiency of women,

and in 1901 there were only 949 females to every 1,000 males. This deficiency is to some extent due to the disproportion between the sexes among immigrants; for those born and enumerated in the Province there are 977 women to every 1,000 men. Among the animistic tribes women usually predominate, and, taking those born in the Hill Districts and enumerated in the Province, the proportion was 1,061 females to 1,000 males. This phenomenon is probably due in part to the practice of adult marriage, and in part to the good position usually assigned to women in the hills. In Nowgong it appears that there was some truth in the popular idea that *kalā azār* spared the female members of the family, as at the last Census, among those born and enumerated in the District, the women exceeded the men in numbers. The deficiency of women was most pronounced in Sibsāgar and Lakhimpur, where there were only 886 and 862 females to every 1,000 males. This is partly due to an actual deficiency of women among the indigenous inhabitants, partly to the large foreign element in the population.

In Assam, as in other parts of India, wedlock is taken as a matter of course; and in 1901 more than half the population were either married, or had at any rate performed the ceremony at some period of their lives. Child-marriage is common among both Hindus and Muhammadans in the Surmā Valley and in Goālpāra; but in Assam proper Brāhmans and Ganaks alone adhere rigidly to this rule, and the lower castes usually defer marriage till the girl is of an age to be able to enter on her duties as wife and mother. Where adult marriage prevails, anti-nuptial chastity is not invariably demanded; and in Assam proper the marriage ceremony often consists of little more than a public acknowledgement of union, which does not receive the sanction of any priestly blessing. The purchase of a bride by service is also not uncommon, and during the time that the man is serving in the house of his prospective father-in-law, he is usually allowed free access to the girl of his choice. There is, however, a curious survival among the Kūkis which points to a time when this permission was not accorded. Here pregnancy entails no disgrace, but on no account must a girl give birth to a living child in her father's house. At the seventh month the baby's head is crushed in the womb, and premature delivery is brought on, in spite of the fact that the process is attended with much risk to the young mother. The age of marriage among men depends largely upon the cost of the bride; and notwithstanding the easiness of the hill girl's morals, men marry early among the animistic tribes, as women Marriage.

are fairly numerous and therefore cheap. When the knot is once tied, the hill woman usually settles down and becomes an exemplary wife and mother, except among the Khāsis, where divorces can be obtained on almost any pretext, and women not unfrequently change their husbands more than once. Such laxity in the marriage laws is bound to be accompanied by uncertainty as to the paternity of the children born, and it is perhaps for this reason that the Khāsi husband is not master in his own house, and that inheritance goes through the female line. Polygamy is nowhere common, as few men can afford the luxury of a second wife. Divorce is recognized by Muhammadans and the animistic tribes, and, in practice, by the lower castes of Hindus, unless the marriage has been contracted by the *hom pura* rite, which is looked upon as indissoluble.

The joint family system is far from prevalent in Assam proper, and even among the upper classes seldom extends beyond the second generation. In the Surmā Valley also it is the exception rather than the rule, and among the middle classes generally ends with the third generation.

The distribution of population by civil condition in 1891 and 1901 (for British territory only, excluding Manipur) is shown in the following table:—

Civil condition.	1891.			1901.		
	Persons.	Males.	Females.	Persons.	Males.	Females.
Unmarried	2,664,494	1,573,539	1,090,955	2,827,613	1,666,963	1,160,650
Married .	2,207,826	1,110,525	1,097,301	2,366,952	1,194,774	1,172,178
Widowed .	562,923	114,844	448,079	647,313	142,323	504,990

Language. The two main indigenous languages of the Province are Bengali, which was spoken by 48 per cent. of the population in 1901, and Assamese, which was returned by 22 per cent. Bengali is the common vernacular of the Surmā Valley, where it is used by 87 out of every 100 people, and of Goālpāra (69 per cent.). Assamese is used by 83 per cent. of the inhabitants of Kāmrūp; but in the tea Districts the proportion of foreigners is very large, and in Darrang Assamese was returned by little more than half the population, and in Lakhimpur by only 39 per cent. In addition to the two main vernaculars, there are a large number of languages peculiar to Assam, most of which belong to the Tibeto-Burman stock, and which, though gradually giving place to Assamese, are still largely used. The most important are: Bodo or plains Kachārī, Khāsī, Synteng, the various forms of Nāgā dialects, Gāro,

Manipurī, Lushai, Kūki, Mīkīr, and Mīrī. The principal foreign languages are, Hindustāni, Mundārī, Santālī, and Oriyā. The number of persons in British territory (excluding Manipur) who returned these different forms of speech in 1891 and 1901 is shown in the following table. Altogether, no less than 167 different languages were returned in Assam in 1901.

Language spoken.	1891.	1901.
Bengali	2,741,947	2,947,916
Assamese	1,414,285	2,349,694
Eastern Hindī, Western Hindī, and Hindustāni	229,456*	351,908
Bodo, Dimasa, and Mech	269,346	237,982
Other languages	780,209	954,378†

* Figures for Hindī.
† Includes 123,481 Khāsī, 54,253 Synteng, 106,035 Nāgā, 133,411 Gāro, 72,011 Lushai, 82,283 Mikīr, 40,472 Mīrī, 37,411 Mundārī, 30,128 Santālī, and 23,755 Oriyā.

The earliest inhabitants of Assam were probably the various offshoots of the great Indo-Chinese hordes, whose head-quarters are supposed to have been on the upper waters of the Yang-tse-Kiang and Ho-ang-ho. At the same time, the Assam Valley must have been colonized by Hindus from the west at a very early date; and Hindu princes were reigning at the eastern end near Sadiyā at the time of the invasion of the Chutiyās, a tribe of Bodo origin, about a thousand years ago. The Chutiyās overthrew the Hindus, but in their turn gave way before the Ahoms, a Shan tribe who crossed the Pātkai from the kingdom of Pong in the thirteenth century, and gradually extended their sway over the whole valley. In the course of their expansion they overthrew the Koch kings, a dynasty of Bodo origin who had attained to considerable power in North-Eastern Bengal; and they repulsed the Muhammadans, who had made several attempts upon the valley and succeeded in holding for a considerable time the two lower Districts of Goālpāra and Kāmrūp. The last wave of immigration was not one of either conquerors or colonists in the ordinary sense of the term, but of tea-garden coolies, who are now beginning to form an important element in the population of the upper Districts of the Brahmaputra Valley. Tribes and castes.

The various tribes of Indo-Chinese origin fall into several groups. The first are the Khāsis, who are believed to be an isolated remnant of one of the earliest waves of migration from the north-east. They differ in many ways from all their neighbours, and on linguistic grounds it has been suggested that they may be connected with the Palaungs and Was in Upper Burma. The second great division includes the Dimasa or The Indo-Chinese tribes.

hill Kachāri, the Bodo or plains Kachāri, who are called Mech in Goālpāra, the Rabhās, the Gāros, the Lalungs, and the eastern sub-Himālayan group consisting of the Daflās, Mīris, Abors, and Mishmis. The Tipperas who occupy the hills south of Sylhet are also of Bodo stock, and there are good reasons for supposing that some of the earliest inhabitants of the Surmā Valley were members of this race. Another group comprises the Lushais and Kūkis, who have migrated from the south, and seem to be connected with the Manipurīs; and the Nāgās, whose extraordinary ferocity differentiates them in some degree from the other hill tribes of the Province. The Mīkīrs are a peaceful tribe, whose language is akin to both Bodo and Nāgā; but language is by no means a certain test of ethnical affinity. The Kachāris, Rabhās, and Mech live on the high grassy plains at the foot of the Himālayas, but most of the remainder occupy the hills of the Province. They are all of sturdy physique, and of a marked Mongolian type. They place few restrictions upon their natural appetites, and the warlike and aggressive spirit of the Gāros, Nāgās, and Lushais for many years gave trouble to the Government. At the present day, many of the Nāgā tribes beyond the British frontier are still bloodthirsty and naked savages. Another division of the Indo-Chinese inhabitants is a branch of the great Tai race, to which belong the Siamese and the Shans of Upper Burma. It includes the Ahoms, who have now to all intents and purposes become a Hindu caste, and several small colonies of Shans who have migrated into Assam in comparatively recent times. The strength of the principal tribes in 1901 was: Kachāris, 240,000; Gāros, 128,000; Rabhās, 67,000; Mech, 75,000; Mīkīrs, 87,000; Lalungs, 36,000; Lushais, 63,000; Kūkis, 56,000; Manipurīs, 256,000; Nāgās, 162,000; Khāsis, 178,000; and Mīris, 47,000.

Hindu castes. Assam proper.

The natural result of the various changes outlined in the preceding paragraphs is that Hinduism in general, and caste in particular, are much less rigid in Assam than in Bengal. The first Hindu immigrants seem to have entered the valley of the Brahmaputra at a time when the boundary lines between one caste and another were not very clearly defined, and the presence of a large non-Hindu population, sections of which from time to time attained to sovereignty, made it impossible for them to affect too strict a standard of religious purity. The higher castes are thus somewhat lax in the observance of the ceremonial details of their religion; while castes which in Bengal are of a comparatively low rank enjoy in Assam

a much more respectable position. Brāhmans and Kāyasths are found in both valleys, but the most characteristic caste of Assam proper is the Kalitā. Various explanations have been put forward to account for the origin of this caste, which is almost peculiar to Assam; but it is now generally thought that they are the remains of a Hindu colony who settled in the Province at a time when the functional castes were still unknown. The Kalitās are divided into two main subdivisions, Bar and Saru, who do not usually intermarry, and there are various functional subdivisions which occupy a slightly lower position than the Bar Kalitā. The names Kewat and Kaibartta are used more or less indiscriminately for the same caste in Assam. Owing to the comparative scarcity of the higher castes, the cultivating Kewats occupy a higher position in this Province than in Bengal; but some of them have taken to styling themselves Māhisya Vaisya, as they resent the attempt on the part of the Nadiyāls or Doms to assume the name Kaibartta. The Koch were originally a tribe of Mongolian origin, who were the masters of Lower Assam and North-Eastern Bengal, till overthrown by the Muhammadans and Ahoms about the beginning of the seventeenth century. They are now, in Lower Assam, a caste into which all converts to Hinduism are admitted. In Goālpāra the term Koch has been abandoned for the more honourable title Rājbansi—'men of royal race.' The Sāloi are a respectable caste in Kāmrūp, who are believed to be connected with the Halwais, or confectioners; and the Patiās, most of whom are found in Nowgong, are theoretically mat-makers. Both of these castes have abandoned their traditional occupation and taken to agriculture. Of castes from whose hands water is not taken by Brāhmans, the principal is the Ahom. They were originally a Shan tribe, who entered Assam in the thirteenth century and settled in Sibsāgar District. They overthrew successively the Chutiyā and the Koch, and eventually became masters of the Brahmaputra Valley. But they never colonized Lower Assam, and the majority of the Chutiyās and Ahoms are still found in Sibsāgar and Lakhimpur Districts. In the seventeenth century they were converted to Hinduism, and shortly afterwards the power of the tribe began to decline. The Jugis are theoretically weavers by profession, but most of them have taken to agriculture. The Nadiyāls or Doms are a fishing caste, and in Assam have never performed any of the degrading offices assigned to them in Bengal. They are cleanly in their persons, and great purists in the ceremonies of their religion.

The Boriā, or Sūt, are a caste peculiar to the Brahmaputra Valley. They are said to be the descendants of Brāhman widows and other persons who have contracted alliances not recognized by customary law.

Castes in the Surmā Valley.

The characteristic castes of the Surmā Valley differ from those in Assam, though many are common to the two valleys. The great cultivating class of Sylhet are the Das (121,000), who often use the prefix Sūdra and Halwā. The Sūdras (46,000) are many of them members of the Das caste: but there is in Sylhet a genuine caste, that has no other name, composed of people who were formerly the slaves of Brāhmans (109,000) and Kāyasths (87,000). The members of the Navasākha, or respectable profession castes, most strongly represented are the Telis, or oil-pressers (39,000), the Goālās, or cowherds (38,000), the Nāpits, or barbers (32,000), the Baruis, or betel-leaf growers (18,000), the Kumhārs, or potters (27,000), and the Kamārs, or blacksmiths (34,000) The Baidyas (5,000) are theoretically doctors, and socially occupy a position immediately below the Brāhmans. The Shāhās (51,000) are by tradition liquor-sellers, but in Sylhet they are the chief trading caste, and many of them have amassed considerable wealth; in the Brahmaputra Valley they are ordinary cultivators, and Brāhmans take water from their hands. The Namasūdras, or Chandāls (170,000), are a fishing and boating caste.

Foreign castes.

The foreign castes in Assam most numerous in 1901 were Baurīs (42,000), Bhuiyās (49,000), Bhumij (34,000), Chamārs (44,000), Ghātwāls (22,000), Kurmīs (21,000), Mundās (81,000), Oraons (24,000), and Santāls (78,000). Nearly all of these persons had originally been brought into Assam to work on tea gardens. The following castes are also numerically strong: Koch (222,000), Rājbansis (120,000), Kalitās (203,000), Nadiyāls (195,000), Ahoms (178,000), Jugis (161,000), Kewats (149,000), and Chutiyās (86,000).

Hinduism. Vaishnavism.

Of the total population of the Province, 3,429,099 persons, or 56 per cent., were returned in 1901 as Hindus, more than half of whom profess the mild tenets of Vaishnavism. This form of Hinduism is especially prevalent in the Assam Valley, where its *gosains*, or principal priests, occupy positions of great influence and dignity. The *gosain* generally lives in a *sattra* or college, surrounded by his *bhokots*, or resident disciples. In some of the smaller *sattras* celibacy is not enforced, but in the larger colleges neither the *gosain* nor the *bhokots* are allowed to marry. The *sattras* are not educational institutions like the Buddhist monasteries of Burma, nor do the inmates wander

abroad into the neighbouring villages to solicit alms. The more important *sattras* hold grants of revenue-free land, which in some cases amount to several thousand acres, and all the non-resident disciples make an annual contribution towards their maintenance. The *gosain* of a large *sattra* is the spiritual head of a wealthy and powerful college, and is looked up to as the ultimate authority in religious and social matters by thousands of villagers, many of whom live miles away. In most of the larger *sattras* the presiding *gosain* is a Brāhman, but in some of the smaller institutions he is a Kalitā or Kāyasth. These priests are the great proselytizing agency in Assam; they exercise a civilizing influence on the aboriginal tribes, and have always been distinguished by their loyalty to Government and by enlightenment and liberality of thought. A special form of Vaishnavism found in the Assam Valley is the Mahāpurushia faith, founded by a Kāyasth named Sankar Deb about the end of the fifteenth century, which represents a revolt against the pretensions of the Brāhmans and the licentious rites of corrupted forms of Saktism. Its followers pay little attention to caste, are willing to accept a Sūdra as their *gosain*, are uncompromising in their hostility to idols, and worship God, in the form of Krishna, with hymns and prayers only. Sankar Deb himself was a vegetarian; but he was unable to impose this rule upon his followers, who were for the most part men of low caste, and they are allowed to eat the flesh of wild but not of domesticated animals. The sect has a following of about 400,000, but the returns have to be accepted with a certain degree of caution.

Other Hindu sects.

Nearly one-fifth of the Hindu population described themselves as followers of Saktī or Kālī, who represents the procreative force as manifested in the female. The temple of Kāmākhya in Kāmrūp is a special object of veneration to the devotees of this creed, as it is said to cover the place where the pudenda of Saktī fell, when her body was cut in pieces by Vishnu; but Saktism, as a rule, is not popular with the inhabitants of Assam, and many of the so-called Saktists were merely garden coolies and rough tribesmen, who had not yet learned sufficient self-restraint to abandon meat and liquor. The devotees of Siva, who is the male counterpart of Saktī, are comparatively few in number. Most of them are found in the Surmā Valley. Another small sect remarkable for the pecularity of its tenets is the Sahaj Bhajan. Each worshipper endeavours to secure salvation by taking a woman as a spiritual guide, but it is said that at their midnight meetings there is

much sexual licence under the cloak of religion. It is, however, possible that these charges are merely the calumnies with which a new creed is usually assailed by the supporters of the established order.

Places of worship.

The standard form of Hindu temple is a dome-shaped structure enclosing the shrine, approached by a short nave. It is usually built of thin flat bricks, with a fine glaze, and enriched with bas-reliefs; but there are comparatively few of these masonry buildings in the Province. Almost every village in Assam proper contains, however, a large barn-like structure, called the *namghor*, in which the people assemble for prayer and worship. In the Surmā Valley there are a few temples or places of this kind, and the ordinary Hindu performs his devotions in a part of his house specially reserved for that purpose.

Muhammadanism.

About one-fourth of the population of the Province, or 1,581,317 persons, returned themselves as Muhammadans in 1901. Nearly three-fourths of them were found in the District of Sylhet, which was conquered at the end of the fourteenth century by Sikandar Ghāzī, who was largely assisted in his enterprise by the famous Muhammadan *fakīr* Shāh Jalāl. This man was a native of Yemen in Arabia, who had been sent by his uncle to Hindustān with a handful of earth, and orders to settle in the place where the earth was similar to the sample he took with him. The ground of Sylhet proved to be of the quality desired, and Shāh Jalāl settled in the newly conquered territory. A fine mosque, which is held to be of peculiar sanctity, has been built over his tomb, and a monthly grant is allowed by Government for its support. The tombs of the 360 disciples of the *fakīr* are to be seen in almost every portion of the town. Muhammadans are also fairly numerous in Cāchār, which for many years has acted as an outlet for the surplus population of Sylhet, and in Goālpāra, where they form more than a fourth of the population. The Brahmaputra Valley was invaded by the Muhammadans on several occasions, and one general is said to have penetrated as far as Sadiyā; but Goālpāra was the only District which they held for any length of time, and the influences of the faith were not largely felt at the eastern end of the valley. In the hills less than 3 per cent. of the population professed Islām, the majority of whom were working on the railway in North Cāchār, or living in the *tarai* at the foot of the Gāro Hills. Only 2,724 persons were returned as Shiahs, and 47 as members of the strict reforming sect known as the Ahl-i-hadīs, or Wahhābis.

The remainder, so far as they returned any sect at all, were Sunnis. The Moriās are a small sect of degraded Muhammadans, who are said to be descended from the followers of Turbak, a Pathān who invaded Assam in the sixteenth century, and was there defeated and killed. They were employed by their captors in various capacities, for which they showed themselves to be totally unfitted, and were ultimately made braziers. They are looked down upon by their neighbours, and the number of persons who admit that they are Moriās naturally does not tend to increase. Muhammadan mosques are usually small brick structures, consisting of an open quadrangle with a covered arcade at the west end; but in some of the remoter parts of the Province service is held in a thatched hut.

Animism, &c. No less than 1,068,334 persons, or 17 per cent. of the population, still profess those various forms of primitive belief which are usually described as animistic. The main feature of this religion is the desire to propitiate the devils who are ever on the alert to injure man, though most tribes recognize the existence of kindly spirits and the possibility of a future life. The number of unconverted tribesmen living in the Surmā Valley is very small, but in the four lower Districts of the valley of the Brahmaputra the proportion varies from 31 per cent. in Nowgong to 21 per cent. in Kāmrūp. In Sibsāgar the animistic tribes form only 7 per cent., and in Lakhimpur 5 per cent., of the total population. In the Hill Districts they form 85 per cent. of the whole. The tribesmen have no special preference for their own forms of religion, and take fairly readily to Hinduism in the plains, and to Christianity in the hills. Conversion would, in fact, proceed rapidly, were it not for the natural reluctance of these primitive people to abandon pork, liquor, and the freedom of intercourse between the sexes permitted by their own religion. Apart from Christianity, the only other religious bodies requiring mention are the Buddhists (8,911), the majority of whom are found in Lakhimpur and Sibsāgar, and the Jains (1,797), who are usually Mārwāri merchants from Rājputāna.

Christianity. The total number of Christians in Assam in 1901 was:—Europeans and allied races, 2,099; Eurasians, 275; natives, 33,595. Between 1891 and 1901 the number of native Christians increased by 128 per cent. The chief proselytizing agency in the Province is the Welsh Presbyterian Mission, whose headquarters are in the Khāsi and Jaintiā Hills. This mission was started in 1841, and in 1903 gave employment to 36 mis-

sionaries, of whom 13 were stationed in the Surmā Valley and 2 in the Lushai Hills. There is no caste system or social prejudice among the Khāsis to act as an obstacle to conversion; they come but little under the influence of Hinduism, and their readiness to accept the Christian faith can be judged from the fact that in 1901 nearly 9 per cent. of the population of the District returned themselves under this head. The Baptist Mission has also met with a large measure of success, the numbers of this sect having risen from 3,767 in 1891 to 10,045 at the last Census. The mission was first started at Sadiyā in Lakhimpur District in 1836, and in 1903 had 21 missionaries. Their main centres are in the Gāro Hills, Goālpāra, Kāmrūp, and Sibsāgar Districts. Both the Anglican and Roman Catholic churches are included in the diocese of Calcutta.

The number of persons in British territory (excluding Manipur) returned under the main religions at the last two enumerations is shown below:—

Religions.		1891.	1901.
Hindus		2,997,072	3,258,522
Animists		928,175	965,027
Musalmāns		1,483,974	1,570,934
Christians	Natives	14,762	33,587
	Others	2,082	2,337
Buddhists		7,697	8,766
Others		1,481	2,705

Occupation.

The economic organization of the Province is of a very simple character, and the great majority of the population are supported by agriculture. In the hills and the Assam Valley there is very little subdivision of function: the ordinary cultivator builds and repairs his own house, makes his own agricultural implements, has his clothes woven at home, and in fact supplies almost all his own simple wants. The occupations returned in 1901 were divided into eight main classes. The number of persons supported by each class and the percentage they form of the total population were as follows: Government service, 34,791, or 0·6 per cent.; agriculture and pasture, 5,172,228, or 84·5 per cent.; personal services, 75,395, or 1·2 per cent.; preparation and supply of material substances, 479,358, or 7·8 per cent.; commerce, transport, and storage, 86,497, or 1·4 per cent.; professions, 84,971, or 1·4 per cent.; unskilled labour other than agricultural, 111,401, or 1·8 per cent.; means of subsistence independent of occupation, 81,702, or 1·3 per cent. The number of actual workers was almost

exactly equal to the number of persons who were supported by others. Of the total number of workers, 1,073,776, or 35 per cent., were women, the great majority of whom take an active share in the cultivation of the land, for, though a woman may not touch the plough, she is very frequently employed to transplant paddy seedlings or reap the crop when ripe.

Food and dress.

The staple food of the people is boiled rice, eaten with pulse, spices, and fish or vegetable curry. Among the well-to-do, pigeon or duck occasionally takes the place of fish; but fish is a very common article of diet in the plains, and is said to be a substitute for *ghī*, which is not very largely used. Goat's flesh is eaten by Muhammadans and Hindus alike, while venison is always acceptable, and in parts of the Assam Valley by no means rare. The restrictions on the eating of flesh are not so stringent as in Upper India, and even respectable Brāhmans take duck, pigeon, and goat. Fowls (like beef) are debarred to the Hindu, and so are sheep, though in parts of Sylhet ram's flesh is eaten even by the higher castes. An orthodox Brāhman in that District will take food only once between sunrise and sunset, but this rule is not observed in the Assam Valley. Domesticated pork is of course forbidden to both Hindu and Muhammadan, but the lower Hindu castes will sometimes eat wild hog. Tea-drinking is very common, especially in the early morning. Sweetmeats usually consist of powdered grain mixed with milk, sugar, and *ghī*. The hillmen and the aboriginal tribes eat flesh of all kinds, even when nearly putrid. Dog is generally considered a luxury by them, and lizards, snakes, and insects are appreciated, but milk is very seldom taken.

The ordinary form of dress for a villager is a cotton *dhotī* or waistcloth, with a big shawl or wrapper, and sometimes a cotton coat or waistcoat. Women in Assam wear a petticoat, a scarf tied round the bust, and a shawl. In the Assam Valley these clothes are generally home-made, and in the case of women, and of the large wraps used in the cold season by men, are frequently of silk. A curious article of dress is a large flat hat, called *jhapi*, made of leaves and split bamboo and decorated with coloured cloth, which serves as a protection against the sun and the rain. These hats are circular in shape, and range from 2 to 4 feet in diameter, but those of the larger size are more often carried than worn. In the Surmā Valley women wear a *sārī*, a piece of cloth about 15 feet long and nearly 4 feet broad; this is fastened round the waist to form

a petticoat, and then brought over the head and shoulders so as to cover the rest of the body. Chemises and bodices are also sometimes used. In this part of the Province there is very little home-made cloth. Manchester piece-goods are in great request, and machine-made coats and shirts are largely worn. The dress of the middle classes does not differ materially from that of the ordinary villager, but a superior material is employed, and shirts are usually worn. In the Assam Valley beautiful silk and cotton cloths are woven by the wives and daughters of the well-to-do, and fine embroidered cloths are produced in Manipur. Boots and shoes are the exception, and in their own homes even the richer people wear wooden clogs. Wooden sandals are also used by villagers in the Assam Valley when travelling or working in jungle ground, where there are tufts of sharp-pointed grass. In the hills several fashions are in vogue. Beyond the frontier, some of the Nāgā tribes go absolutely naked, and even in British territory Nāgā men and women are often content with the very minimum of apparel. The state dress of the Khāsis, on the other hand, consists of a silk waistcoat and richly-embroidered tunic, set off with much handsome jewellery; and an Angāmī Nāgā in his war-paint is a distinctly impressive sight.

Dwellings. The house of the ordinary villager consists of three or four small and ill-ventilated rooms, built round three sides of a court-yard. The walls are usually made of reeds plastered over with mud, the roof of thatch supported on bamboos, the floor of mud. In the Assam Valley the materials required for the construction of a house do not, as a rule, cost the proprietor anything but the labour of procuring them, but the houses are small and generally badly built. In the Surmā Valley the villagers take more trouble; the cottages are raised on high plinths, are well thatched, and have an arched roof-tree to resist the storms. Brick houses are very rare, and the dwellings of the middle class are in the same style, but larger and of better quality than the cottage of the peasant. The furniture of the cultivating classes is simple, and consists of a few boxes and wicker-work stools, brass and bell-metal cooking utensils, earthen pots and pans, baskets, and bottles, and in the Assam Valley a loom. The villager sometimes sleeps on a small bamboo *machān* or platform, and sometimes on a mat on the floor, but the middle classes have beds, tables, and chairs in their houses. The animistic tribes usually build on piles, the floor being raised a few feet above the ground. The house consists of one long building, divided into cubicles

by a few partitions. Among certain tribes this building is enlarged to meet the wants of the growing family, and sometimes as many as sixty persons reside in one barrack.

Hindus burn and Muhammadans bury their dead. Some animistic tribes follow the Hindu custom, unless the death has been due to an infectious disease, when they are afraid of the infection being carried in the smoke of the funeral pyre; others bury, while a few tribes simply throw dead bodies into the jungle. Some tribes preserve the corpses of their wealthier men for several months after death. They are placed in wooden coffins inside the house, and the liquid matter is carried off through a bamboo. The Paithes, who live in the Lushai Hills, smear a greasy preparation over the corpse, which preserves and hardens the skin. It is then dressed in its best clothes, and in the evening is brought outside the house, and rice beer is poured down its throat. This disgusting performance is sometimes continued for several weeks. **Disposal of dead.**

Dice, cards, and chess are played by the well-to-do; and the cultivators in the Assam Valley amuse themselves with simple theatrical performances, music, singing, dancing, buffalo and cock-fights, and in places with a game in which two eggs are banged together, a forfeit being paid for the one that is broken. The ordinary Hindu festivals, such as the Holī, Rath Jātra, Janmashtami, Kālī, and Durgā *pūjās*, are observed. Special celebrations are the Bishori *pūjā* in honour of the goddess of snakes and the Kārtik *pūjā* in Sylhet, and the Māgh and Baisākh Bihus in Assam. The Māgh Bihu is the harvest home. The cultivators feast after having gathered in their crops, bathe at dawn, and then warm themselves at bonfires of rice straw, which have been prepared several weeks beforehand, and which form a conspicuous feature in the rural landscape towards the end of December. The Baisākh Bihu, which ushers in the new year, lasts for a week, and is an occasion of some licence. Boys and girls join in songs and dances of a somewhat unrestrained character, and lapses from chastity are considered venial. This festival not unfrequently gives rise to suits for abduction against lovers who have induced the object of their affections to elope with them, instead of paying the usual bride price to the parents of the girl. The anniversaries of the deaths of the two Vaishnavite reformers, Sankar Deb and Mādhab Deb, are also observed by the Assamese. In the Surmā Valley the villagers indulge in boat-races in long canoes, manned by from fifteen to twenty **Amusements.**

pairs of paddlers, who keep time to the songs of a man who dances in the centre of the vessel and beats a pair of cymbals. The Khāsis are much addicted to archery competitions, and are very skilful with the bow; and the Nāgās amuse themselves by putting the weight, leaping, and exercises on the horizontal bar.

The best-known game of all is, however, polo, which is supposed by some to have been introduced to European players from Manipur, and which is still played by the natives of that State with the greatest enthusiasm. A good Manipurī pony, though seldom over twelve hands high, has, for its size, remarkable speed, courage, and endurance. There are usually from five to seven players on each side, there are often no goal posts, and no attention is paid to the rules prohibiting crossing, fouling, or reckless use of the stick. The rush of a Manipurī team thus suggests a cavalry regiment practising shock tactics, and were it not for the small size of the ponies serious accidents would frequently occur. The pony's bridle is covered with large brightly-coloured balls of wool, the rider's legs are protected by curious leather shields, and while the upper part of his body is clothed in gay attire, and his calves covered with gaiters, his thighs are almost naked. The general effect is most striking. The men possess a wonderful command over the ball, and hit it from almost any position in any direction.

Nomenclature. Hindus of the higher castes usually have two names, one corresponding to the Christian name of Europe, the other a family name. The number of family names is, however, so small that they do not give much clue to the individuality of the bearer. A caste name, such as Sarmā for Brāhmans, Gupta for Baidyas, and Das for all castes other than these two, is sometimes added. Titles, such as Rai, Chowdhury, Mazumdar, Gohain, Phukan, Baruah, are, however, in common use, especially in the Assam Valley. Proper names are often of a grandiloquent character, such as 'Lord of the earth and moon,' 'Delight of women'; but children are sometimes called after the day of the week or the month in which they were born. Women usually bear the names of goddesses or flowers. Among the poorer people, names like Fedela, 'The dirty one,' are sometimes given with the idea of averting the jealousy of the gods. The Khāsis attach the male prefix U and the female prefix Ka to all proper names. Common affixes of place names are *ganj* in the Surmā Valley, which indicates a market; *pur*, a town; and in Assam *garh*, a fort and embank-

ment; *gao*, a village; *dai*, water; and *ranga*, red, referring to the colour of the soil.

Agriculture. Character of soil and system of cultivation.

The Province of Assam consists, as has been already mentioned, of two great alluvial plains, surrounded on three sides by mountains. The soil formation thus falls into two main classes: that of the hill tracts, which are being denuded; and that of the valleys, which are being formed by the same process. There is a further distinction between the conditions prevailing in the two valleys, due to the difference in their elevation above sea-level. During the rainy season there is usually a strong current in the Brahmaputra and the other rivers of the Assam Valley; and where the current is swift it is only the heavier portion of the matter held in suspension—that is, the sand—which is deposited. In the Surmā Valley, where there is very little fall, the rivers are sluggish, and when they overflow enrich the fields with silt. Silt is also deposited in the Assam Valley in slack water away from the main current, and the soil of that Division consists of a mixture of clay and sand in varying proportions, which ranges from pure sand to clay so stiff as to be hardly fit for cultivation.

The land best adapted for the growth of rice, the staple food-crop of the Province, is a deep, soft, clayey loam, which has been rendered light and friable by the action of worms. Where there is too much sand, the soil is too light to retain the water necessary for the development of the crop. Where the clay is too stiff, it is impervious to air and water, and difficult to plough, and the roots of the plant are likely to be choked. The fertility of the soil is also largely affected by the quantity of organic matter it contains. This humus, or vegetable mould, is formed by the decomposition of vegetable matter, and is most abundant in land that has long remained under jungle. It contains nitrogen, which is one of the most important elements of plant food, and is useful alike to clayey and sandy soils. The former it renders less clinging and less liable to bake into hard clods, while to the latter it gives more adhesion and greater capacity to retain water. A further advantage is to be found in its solvent action on the iron in the earth. By this means it tends to check the formation of the hard red pan, which often underlies thin poor soils, and injures the crop by interfering with the growth of the roots. The suitability of land for rice depends, however, chiefly upon its elevation, and its capacity for retaining moisture.

Generally speaking, the country on either side of the Brahmaputra falls into four classes. The first is the *chapari*,

The Brahmaputra Valley.

or land in the immediate neighbourhood of the river, which is heavily flooded during the rains. It is, as a rule, covered with high grass jungle, which has to be cut down and burned before it can be brought under cultivation; but, when the floods do not rise too soon, it yields excellent crops of *āhu*, or summer rice. The seed is sown in March or April and reaped in June or July, and is followed by a crop of mustard or pulse, which is sown when the river falls in October and November, and gathered about three months later. When the land is first cleared of jungle it is free from weeds, but they spring up with great rapidity in the second and third year of cropping, and it is then abandoned for from eight to ten years to allow the high jungle time to kill them out. Behind the *chapari* comes a belt of low-lying land, in which *bao*, a long-stemmed variety of rice, is grown. It is usually sown in April or May and reaped in November and December. Summer rice is sometimes mixed with *bao*, in the hope of getting a crop before the river rises. The water drains off slowly from this belt, and the land is left too cold and damp for winter crops. The level of the country then gradually rises above the reach of ordinary floods, and *sāli*, or transplanted winter rice, becomes the staple crop. The grain is sown in nursery beds, the seedlings are transplanted in June or July, when they are about two months old, and the harvest is reaped in November and December. *Sāli* is divided into two main varieties, *bar* and *lahi*. The former gives a heavier yield, but ripens later and requires more water than *lahi*, and is therefore usually planted on lower land. This belt of land is a broad one, containing most of the permanent cultivation and the majority of the agricultural population. Beyond this again comes the submontane tract. The level of the land here is higher, and the fields are often irrigated from hill streams. The chief crop is *sāli*, or a transplanted form of *āhu* known as *kharma*. This land is practically free from all risk of flood, and artificial irrigation renders the harvest practically secure.

These four belts are not, however, found in all parts of the valley. Very little *bao* is grown in the Districts of Darrang, Sibsāgar, and Lakhimpur; and though, as a rule, *chapari* is found on both sides of the Brahmaputra, there are places where the margin of permanent cultivation comes down almost to the river bank. Sugar-cane is usually planted on high land near the village site in the broad belt of permanent cultivation.

The Surmā Valley.

The conditions of the Surmā Valley are somewhat different. There is no *chapari*, and the banks of the rivers are the

highest and the most fertile part. In Cāchār and the eastern part of Sylhet the bulk of the land resembles that found in the broad belt of permanent cultivation in Assam, and the staple crops are *sail* and *aus*, which correspond to the *sāli* and *āhu* of the other valley. The western portion of Sylhet becomes one great swamp in the rains, and is fit only for the cultivation of *āman*, a form of long-stemmed rice. A fourth kind of rice, called *sailbura*, is grown in the large *haors* or basins to which reference has been already made. It is sown at the end of the rains and harvested about May, and gives an exceptionally large yield per acre. Sugar-cane is often grown on low land, and mustard on old high land near the village site, where it gives a poorer out-turn than on the fertile river banks of Assam.

The Hill Districts. The majority of the hill tribes cultivate on the *jhūm* system. A patch of land is cleared with axe and fire, the soil is hoed up, and the seeds of hill rice, chillies, cotton, millets, gourds, and other vegetables dibbled in among the ashes. The same plot is seldom cropped for more than two or three years in succession. After this time the weeds spring up in great luxuriance, and further cultivation would destroy the roots of *ikra* or bamboo jungle, upon the growth of which the land depends for its fertility. *Jhūms* are left fallow for as long a time as possible. The shortest period is four years, but this is generally extended to eight or ten. In the Khāsi Hills rice is grown in terraced and irrigated fields in the valleys, but other crops, such as potatoes and millet, are raised on the bare hill-side. The Tankul and Angāmī country lies too high for the successful rearing of *jhūm* rice, and there is not sufficient land to permit the people to rely on this system of cultivation. The villages of these tribes are surrounded by admirably constructed terraced rice-fields, built up with stone retaining walls at different levels, and irrigated by skilfully designed channels, which distribute water over each step in the series.

Method of cultivation. The agricultural implements are all of a very primitive character. They include a wooden plough with an iron-tipped share, wooden rakes and mallets, a rough bamboo harrow, sickles, bill-hooks, knives, and baskets. In Assam proper sugar-cane is pressed between two grooved logs of wood, turned by a pole, and the iron mill, though more expeditious and economical, is little used. Winter rice is sown in carefully-manured beds near the homestead, which at the commencement of the rains form brilliant patches of green in the landscape. While the shoots are growing, the cultivator ploughs his fields some four or five times, reducing the soil to a fine

puddle of clay, and repairs the low mounds intended to retain the water. In Assam proper the seedlings are planted out in handfuls by the women, who can be seen up to their knees in mud, stooping for hours together under the burning summer sun. The distance at which the clumps are placed depends upon the quality of the soil, varying from 8 inches to 3 feet. As the crop grows, it covers the plain with a rich carpet of green, turning towards the end of the year to a fine yellow. When ripe, the grain is cut off near the head, tied in bundles, and carried, slung from bamboos, to the homestead, where it is threshed out by cattle as occasion requires. *Bao* or *āman* and *āhu* are sown broadcast, but the yield is usually smaller, and the quality of the grain is not so fine. Mustard requires four or five ploughings; and when new land is broken up, the cultivators have to press down the high grass jungle and wait till it is sufficiently withered to catch fire. Sugar-cane is a crop which, though yielding good returns, entails a considerable amount of labour. The land is generally ploughed twice for pulse, but the seed is sometimes sown broadcast over fields that have just yielded a crop of rice. The plants are pulled up when ripe, left to dry for a week or ten days, and brought in at the leisure of the cultivator.

Assam is a purely rural country, with no large towns, and in 1901 no less than 84 per cent. of the population returned agriculture as their means of livelihood. The proportion of agriculturists in the different Districts was highest in the Gāro, Nāgā, and Lushai Hills, and in Darrang, Nowgong, and Sibsāgar. It was lowest in Kāmrūp and Sylhet, where there were large numbers of fishermen and priests.

Area under different crops.

The area under different crops in the five upper Districts of the Brahmaputra Valley is returned by the local revenue officials. The figures may be accepted as fairly accurate, but do not, as a rule, include the comparatively small area occupied by tribes not assessed to land revenue. The principal crops raised are rice, pulse, tea, sugar-cane, and rape and mustard. The area under these crops will be found in Table IV, appended to this article (p. 126); but this table gives a very imperfect idea of the cultivated area of the Province, as it does not include the Hill Districts, Sylhet, and Goālpāra, for the greater part of which there are no returns, or Cāchār, the figures for which have become available only in recent years. As a matter of fact, there are probably at least four million acres under rice in Assam, and over a quarter of a million under mustard.

Wheat is sown in Goālpāra, where it is believed that there are about 10,000 acres under this crop; elsewhere both wheat and barley are raised only in small patches by foreigners. Jute is grown on a commercial scale in Goālpāra and Sylhet, and is gradually extending into Kāmrūp; but in the rest of the Province the villagers plant only enough to supply the home demand. The estimated area under jute in 1903–4 was 39,000 acres. Linseed is largely grown in Sylhet, but is not common elsewhere. Garden crops include tobacco, several kinds of plantain, vegetables, *pān* or betel-leaf, the areca palm, pepper, and various kinds of spices. In the Surmā Valley *pān* is grown in the orthodox way by Baruis in neatly fenced gardens, completely covered with the tendrils of the plant; but in Assam it is usually trained up the stem of the areca palm. Plantains of different kinds are found near every house; and in the Assam Valley the ash is largely used as a substitute for salt, the people still clinging to the customs which prevailed in the days of native rule, when mineral salt could not easily be obtained. Pepper is mentioned in Welsh's Report on Assam, in 1794, as a plant that throve well, but, though the cultivation would be most lucrative, only a small quantity is grown. The Khāsis export potatoes, oranges, pineapples, and the leaves of the bay-tree; and cotton is grown by most of the hill tribes. It has a very short and somewhat harsh staple, but it is useful to mix with wool and the proportion of seed is unusually low.

In Cāchār the rice crop is usually distributed under the three chief varieties of the grain in the following proportions: *sail* or *sāli*, 70 per cent.; *aus* or *āhu*, 22 per cent.; *āman* or *bao*, 8 per cent. For the Assam Valley the proportion is *sāli*, 70 per cent.; *āhu*, 22 per cent.; and *bao*, 8 per cent. *Ahu* and *bao* are grown chiefly in Lower Assam; in Darrang, Sibsāgar, and Lakhimpur there is not much *āhu* and hardly any *bao*. The normal yield of *sāli* rice is about 9 cwt. of cleaned grain per acre, and that of *āhu* and *bao* about a cwt. less. Mustard gives about 5 cwt. of seed, and sugar-cane about a ton of raw molasses per acre. These figures represent only a rough general standard; the actual crop obtained is often considerably in excess or defect of the mean.

Cow-dung and the sweepings of the courtyard are used to manure garden crops, sugar-cane, jute, and the nurseries in which rice seedlings are grown; and in the more congested parts of the Province cow-dung is sometimes spread on the rice-fields themselves. The *chapari* and the shifting cultivation Use of manur

of the hill tribes are enriched by the ashes of the jungle with which the land was originally covered. Exhausted tea land is top-dressed with richer soil, and on some gardens the use of oilcake and farm-yard manure is coming into favour. The Khāsis fully appreciate the value of cow-dung as a fertilizer, but all over the Province immense quantities of this excellent manure are allowed to go to waste. There is practically no rotation of crops, apart from the system under which summer rice is followed by pulse or mustard, while pulse is usually sown on the rice-seedling bed, as it is thought to benefit the soil.

Extension of cultivation.

It is impossible to obtain accurate figures showing the extension of cultivation in the Province as a whole. No statistics are available for the hills, or the permanently settled estates of Sylhet and Goālpāra, and there is a considerable difference between the conditions prevailing in the two valleys. In Assam proper and in the Eastern Duārs the extension of cultivation is best measured by the growth of the area settled at full rates, excluding the land held by planters. The area so settled in 1881–2 was 1,335,000 acres. During the next ten years there was an increase of 15 per cent., which was, however, partly due to the operations of the cadestral survey, and to greater strictness in the measurement of land. Then ensued a period of extreme depression in Lower and Central Assam, and by 1902–3 the area settled in this way had increased by only 63,000 acres, or 4 per cent. more than the total for 1891–2. This slow rate of increase, in a Division where there are enormous tracts of cultivable waste available for settlement, was due to exceptional mortality which seriously reduced the indigenous population, and to the damage done by the great earthquake of 1897, which interfered with the natural drainage in Lower Assam.

The settled area of Cāchār has increased rapidly since it came under British rule. In 1843, when the first settlement was made, the area covered by the operations was only 97,900 acres. In 1903 the settled area of the District was 607,000 acres. The cultivated area held on ordinary tenure increased by 24 per cent. between 1883–4 and 1896–7. It is impossible to ascertain the extent to which cultivation has extended in Sylhet District as a whole; but in the Jaintiā *parganas* the cropped area increased by 22 per cent. during the currency of the last settlement, which was for a period of fifteen years.

The great obstacle to the extension of cultivation is the

absence of a labouring class. In the Surmā Valley, Kāmrūp, and Goālpāra agricultural labourers are extremely scarce, and in Central and Upper Assam they are practically non-existent. The climate of the country in the rains is not calculated to stimulate the inhabitants to prolonged physical exertion; and ryots, who are compelled to plough, plant, and reap with their own hands, are not likely to cultivate more land than is absolutely necessary for their maintenance.

Introduction of new varieties.

The villagers usually select the best heads of rice for seed grain, but are not very prompt to adopt new varieties. The cultivation of jute on the commercial scale is slowly spreading up the Assam Valley, and the *ras* and *balam* varieties of rice have recently been tried. Potatoes were introduced into the Khāsi Hills by Mr. Scott in 1830, and are now extensively cultivated in that District. Of recent years the plants have been attacked by disease, but fresh varieties, imported by Government, have been much appreciated by the villagers. An experimental farm is maintained near Shillong, and scientific farming has been undertaken on a small scale by Europeans and Bengalis in Darrang. Efforts have been made by the Agricultural department from time to time to introduce new and improved varieties of seed, but the results produced have been inconsiderable. In 1903 a garden of European fruit trees was opened near Shillong, as the Khāsis can be relied upon to adopt without delay any forms of fruit culture that seem likely to prove remunerative.

Agricultural loans.

Generally speaking, there is not much serious indebtedness among the cultivators of the Province, and the creditors themselves are often agriculturists. In Assam there is no rich upper or middle class, and few natives other than the Mārwāris are possessed of any capital. The rate of interest is in consequence extremely high, varying from $37\frac{1}{2}$ to 75 per cent. per annum. In parts of the Assam Valley it is the custom for the poorer villagers to take advances from traders on the standing crop, which is subsequently sold at a price below that ruling in the open market. This is especially the case with mustard, which cannot always be removed till the rivers rise in the rains. In the Surmā Valley the producer often deals direct with the trader from Bengal, and the practice of giving advances is not so common. In Sylhet it is said that the indebtedness of the cultivators is increasing. New wants have arisen, but the villagers do not care to make the additional exertions required to provide the means to gratify them. Wages, however, still rule high, so that there cannot be much poverty, and

it is seldom necessary for Government to make loans to agriculturists. The total amount so advanced in 1903-4 was less than Rs. 24,000.

Cattle, &c. The cattle of Assam are a peculiarly degenerate breed. Their degeneracy is largely due to a complete disregard of all the laws of breeding, to overwork, and to absolute neglect. The valley of the Brahmaputra is exceptionally well supplied with grazing grounds, and there are few places, even in the more densely settled tracts, where pasture cannot be obtained within 5 miles of the village site. The grazing near the village is, however, usually poor, and far inferior to the rich grass that grows in the cold season on the marshes that fringe the banks of the Brahmaputra and its tributaries. Where grazing is not readily obtainable, rice straw is used for fodder. In the Surmā Valley the *haors*, or great depressions, to which reference has been already made, afford excellent grazing in the cold season, but during the rains the cattle are almost entirely stall-fed on straw, or on grass dragged from the bottom of the flooded tracts. The villagers pay very little attention to the comfort of their animals, and their condition is not much better than that of the cattle in Assam proper. In the hills the cattle, though small, are fat and sturdy, and, where milked, give a small but very rich supply. The buffaloes in the valley of the Brahmaputra are particularly fine animals, but they have been largely supplemented by the smaller breed imported from Bengal. There is no indigenous breed of sheep, or, except in Manipur, of ponies. The Manipurī pony is a very hardy little animal, but unfortunately the breed has nearly died out. Cart-bullocks are imported from Upper India, and ponies and sheep from Bhutān. The average prices of farm stock are: for a buffalo, Rs. 50 to Rs. 70; for a plough bullock, Rs. 15 to Rs. 25; for a cow, Rs. 8 to Rs. 15; and for a goat, Rs. 2-8 to Rs. 4. Serious loss is caused by rinderpest, foot-and-mouth disease, diarrhoea and dysentery, and other forms of cattle disease. There is only one veterinary surgeon in the Province, who has been engaged by the local boards of Sibsāgar District.

Irrigation and flood protection. No irrigation works have been constructed by Government, and no distinction has hitherto been drawn by the Agricultural department or the Settlement Officer between irrigated and unirrigated land. Irrigation is, however, freely resorted to by the Kachāris and Mech, who live near the foot of the Himālayas in the Assam Valley. The villagers combine to construct small channels, sometimes of considerable length, through which they convey the water of the hill streams to their fields. The abun-

dance and certainty of the crop fully repay them for the labour expended on the work. In Sylhet the water in the cold season is dammed up in the lowest part of the *haors* and thence diverted on to the *boro* rice crop. Mention has already been made of the irrigation works of the Khāsis and Angāmī Nāgās. In normal years, however, the rainfall in every part of the Province is so abundant that the crops seldom suffer from want of moisture, and the chief danger to cultivation arises from flood. The system of forced labour which prevailed under the Ahom Rājās enabled them to construct embankments along the Brahmaputra and many of its tributaries, some of which are still kept in repair. These works were especially numerous in Sibsāgar District in the neighbourhood of the Ahom capital, where the country was protected from the floods of the Brahmaputra, the Disāng, the Dikho, the Dihing, and the Darikā. A considerable sum of money has already been expended by the British Government on the maintenance of these embankments, and a scheme is under consideration for the reclamation of a large area now exposed to flood. Raised roads along the banks of rivers are also common in Lower Assam.

The tea industry.

From the commercial point of view tea is the most important crop raised in Assam. The first discovery of the tea-plant growing wild in Upper Assam, in 1821, is generally assigned to Mr. Robert Bruce, who had proceeded thither on a mercantile exploration. The country then formed part of the Burmese dominions. But the first Burmese War shortly afterwards broke out; and a brother of the discoverer, having been appointed in 1826 to the command of a flotilla of gunboats, followed up the subject, and obtained several hundred plants and a quantity of seed. Some specimens were ultimately forwarded to the Superintendent of the Botanic Gardens at Calcutta. In 1832 Captain Jenkins was deputed by Lord William Bentinck, the Governor-General, to report upon the resources of Assam, and the tea-plant was specially brought to his notice by Mr. Bruce. In 1834 Lord William Bentinck recorded a minute, stating that his attention had been called to the subject previous to his having left England; and he appointed a committee to prosecute inquiries, and to promote the cultivation of the plant. Communications were opened with China with a view to obtain fresh plants and seeds; and a deputation, composed of gentlemen versed in botanical studies, was dispatched to Assam. Seed was obtained from China; but it was ascertained that the tea-plant was indigenous in Assam, and might be multiplied to any extent. Another

result of the Chinese mission, the procuring of persons skilled in the cultivation and manufacture of black tea, was of more material benefit. Subsequently, under Lord Auckland, a further supply of Chinese cultivators and manufacturers was obtained, who were well acquainted with the processes necessary for the production of green tea. The experimental introduction of tea-planting into Assam was undertaken by Government. In 1835 the first tea garden was opened at Lakhimpur. In 1838 the first twelve chests of tea from Assam were received in England. They had been injured in some degree on the passage; but on samples being submitted to brokers, the reports were highly favourable. It was, however, the intention of Government not to carry on the trade, but to resign it to private enterprise as soon as the experimental cultivation proved successful. Mercantile associations for the planting and manufacture of tea in Assam began to be formed in 1839; and in 1840 Government made over its experimental establishment to the Assam Tea Company. In 1851 the crop of this company was estimated at 280,000 pounds. In 1854 gardens were opened in Darrang and Kāmrūp; and in 1855 the plant was discovered growing wild in Cāchār. During the next ten years, capital flowed into the business from all quarters. Land was recklessly taken up, to be sold to speculators in England for extravagant sums; and tea-growing for a time fell into the hands of stock-jobbers and bubble companies. The crash came in 1866; and for the next few years this promising industry lay in a condition of extreme depression.

Development in recent years.

About 1869, matters began to amend, and during the last thirty years there has been a great development of the industry. The returns for 1871 showed (in round figures) that 11,000,000 pounds of tea were manufactured in the Province. For 1881 the figures were 37,000,000 pounds; for 1891, 90,000,000 pounds; and for 1900, 141,000,000 pounds. The supply had by this time begun to indicate signs of outrunning the demand, and attempts were made to restrict the output by the introduction of a system of finer plucking. This was, however, but a temporary check, and in 1903 the output exceeded 145,000,000 pounds. There were in that year 764 gardens, which gave employment to 846 Europeans and 409,000 natives. The average out-turn was 445 pounds per acre, and the crop was valued at wholesale prices in Calcutta at more than 3½ millions sterling. The capital invested in tea is probably about £30 for every acre under cultivation; and as 338,000 acres were planted out in 1903, the capital value of the gardens

in Assam may be estimated at nearly 10¼ millions sterling[1]. About four-fifths of the capital employed by companies is owned by companies whose head offices are situated in England.

The labour supply. The want of labour has always been one of the most serious obstacles to the development of the industry. The mass of the population of the Province are above the necessity of working for wages, and nearly all the coolies employed on the plantations have to be imported from other parts of India. Assam is, however, unpopular among the labouring classes; the journey from the recruiting districts is troublesome and expensive, the class of persons capable of working successfully in the damp climate of the Province is limited, and of recent years the supply of labour available has not been sufficient to satisfy the requirements of the planters. Special Acts have been passed to regulate the relations between the employers and their labour force. Careful provision is made for the welfare of the cooly. He is housed in neat and comfortable lines; he is provided with an excellent water-supply, generally drawn from masonry wells; and when sick he is cared for in a comfortable hospital by a native doctor working under the supervision of a European medical man. The provision of all these comforts and the importation of the labourers themselves cost large sums of money, which no one would be willing to expend without some guarantee that the coolies when imported would consent to remain on the plantation. This protection is afforded by the law, which lays down that a labourer, provided that he is well treated, must not leave the garden to which he is indentured before the expiry of his contract, unless he chooses to redeem it by a money payment. During the ten years ending with June 30, 1903, the total number of persons brought up to the tea gardens was 543,800.

Class of land required. The land best suited for the plant in the Brahmaputra Valley is the virgin soil of the dense forests at the foot of the hills, where the climate is hot and moist. In the Surmā Valley the most productive gardens are those planted on the low ranges of hills in the south of Sylhet District, or on reclaimed marsh land. The yield in the Surmā Valley is higher than in Assam proper, but the cost of production and the price obtained for the manufactured tea are alike lower. Indigenous seed gives

[1] A considerable proportion of this tea property is held by private owners. The capital value of gardens owned by public companies appears to be about £40 per acre, and this estimate, if applied to the total acreage, would show a capital value of 13½ millions sterling.

the best results, and after this a hybrid of indigenous and China. It is many years since China seed was planted out in new clearances, and considerable areas covered by this plant have been abandoned. The most important tea Districts and their area under the plant in 1903 were: Sibsāgar, 78,500 acres; Sylhet, 73,500 acres; Lakhimpur, 69,300 acres; and Cāchār, 60,000 acres.

System of tea manufacture.

The following is a short account of the system of cultivation and manufacture usually followed. The seed is allowed to germinate before being sown in carefully-selected nursery beds. When the plants are about 12 inches high, they are planted out at distances of from 4 to 5 feet apart. As the bush grows it is pruned, in order to remove decayed or injured wood, to encourage the production of new shoots, and to form as large a surface for the latter purpose as possible. The wild tea-tree grows to as much as 50 feet in height, whereas a well-pruned bush does not exceed 3 or 4 feet. When the plant is about three years old it is fit for plucking. The usual practice is to pick off the top of each young shoot, removing either two or three leaves and the bud. The shoot then germinates again, and the plant thus yields eleven or twelve 'flushes,' as they are called, during the season.

When the leaf has been taken to the tea-house it is spread out in thin layers and allowed to wither, and then placed in the rolling machines. The object of rolling is to break up the cellular matter and liberate the juices, and to give a twist to the leaf. After the leaf has been rolled, it is spread out in a cool room to allow oxidation to take place. As soon as this process is complete, it is placed in the firing machines until the last trace of moisture has been expelled and the tea is crisp to the touch. It is then sifted, sorted, fired again, and finally packed in lead-lined boxes while still warm.

Rents, wages, and prices. Rents.

In most of the Districts of Assam the actual cultivators of the soil usually hold direct from the state, and the area of land on which rent is paid is inconsiderable. A large part of Goālpāra and of the more densely populated portions of Sylhet was, however, included in the Permanent Settlement of Bengal; and the system of land tenure in Cāchār, and the existence of large estates on privileged rates of revenue in Kāmrūp, have tended to produce a tenant class, which at the last Census amounted to more than one-third of the total number of persons supported by agriculture. The amount of waste land still available in the Province is, however, so enormous, that there is little risk of landlords exacting too large a proportion

of the profits of the soil, and Sylhet and Goālpāra are the only two Districts in which a tenancy law (Bengal Act VIII of 1869) is in force. In Sylhet the rents charged vary from Rs. 12 to 12 annas for an acre of rice land, but the ordinary rate is about Rs. 3. There is a certain amount of competition among the cultivators to obtain land; but if the owner takes advantage of their necessities to raise the rates to an unreasonable pitch, he experiences great difficulty in realizing the demand. In Goālpāra, which is very sparsely peopled, rents vary from Rs. 6 to 12 annas an acre, the average rent paid by the cultivators for an acre of rice land being between Rs. 2 and Rs. 3. In Assam proper there is very little subletting, except in Kāmrūp. The rent usually charged is the amount assessed by Government at full rates on land of a similar class, but occasionally it is as much as Rs. 6 for an acre of good rice land. In Upper Assam rents of Rs. 9 an acre are sometimes paid for rice-fields which are exceptionally fertile or have some special advantages of site; but the total area sublet is small, and in a large number of cases the tenant merely pays the Government revenue assessed upon the holding. In Cāchār the average rent is about Rs. 6 per acre, varying from Rs. 7-8 to Rs. 4-8.

In place of cash rent the landlord occasionally receives a portion of the produce. In Sylhet the amount demanded is usually 3¼ cwt. of unhusked rice per acre, but tenants prefer, as a rule, to pay in cash. In Assam proper the standard form of produce rent is the *adhi*, or half-share system. The owner of the land usually gives half the seed and pays the revenue; the tenant, as a rule, does the actual cultivation, but the crop can be divided at any stage, according to the terms of the agreement. The tenant's responsibilities sometimes cease when the land has been reduced to puddle, and the landlord has to transplant his seedlings and reap, carry, and thresh his share of the crop. At the other extreme come the cases where the tenant is required to thresh the grain before it is divided. Produce rents.

Over the greater part of the Province the supply of local labour is extremely limited; and although in most Districts the wages of unskilled labour are said to be 6 annas a day, it would be impossible to procure any considerable body of persons even for a larger sum. Hired labour is not much used for cultivation; but when a labourer is employed he receives from 4 to 5 annas a day, grain being often given in lieu of cash. In Lower Assam it is usually the practice to give a servant a large advance, which is gradually worked off; Wages.

but in some cases the work done is set against the interest of the loan, so that the debt itself is never liquidated, and the debtor cannot succeed in freeing himself from his obligations. It is, however, to the interest of the employer to treat his servants well, as he has little hope of recovering the loan if they choose to leave him, and they are generally well fed and clothed, and treated almost as members of the family. In Sylhet the prejudice against working for hire is not so strong as in Assam proper, where the feeling appears to be partly due to a revulsion from the system of forced labour which prevailed under the Ahom Rājās. The ordinary wage paid to farm-labourers is 4 annas a day, but at harvest time they often receive double that sum. Assam, however, practically depends for its labour supply upon other parts of India. Railways are built, roads are made, and gardens are worked by imported coolies. Male coolies on gardens usually earn from Rs. 4 to Rs. 5 a month, and women about a rupee less; but they receive in addition substantial concessions in the shape of houses, water-supply, and medical comforts. Artisans are usually foreigners, and are said to earn from Rs. 15 to Rs. 30 a month.

Prices. Prices in Assam are still liable to strongly marked fluctuations, and vary considerably in different parts of the Province. As a rule, they range higher in Upper Assam, where there is a large foreign population to be fed, but are fairly low in Lower Assam and Sylhet. Since 1893, there has been a general tendency towards a rise, due partly to bad harvests in the Province, partly to famine in other parts of India, and partly to a large increase in the foreign population. In good seasons, however, rice is still by no means dear. In 1899 and 1900 the average price for the Province was nearly 15 seers for a rupee (= about 45 lb. for 2 shillings), as compared with an average for the six years ending with 1879 of $13\frac{1}{2}$ seers (= about $40\frac{1}{2}$ lb. for 2 shillings). Such extensions of cultivation as have taken place do not tend to reduce the price of rice, as their effect is more than counterbalanced by the increase in the foreign population. The same cause has, to a great extent, nullified the effect produced by the improvement of communications, though in 1900, when there was a bad harvest in Cāchār, the stringency was relieved by the importation of large stocks of grain by the Assam-Bengal Railway. Generally speaking, the chief characteristic of Assam is sharp variations from year to year and also from place to place, a distance of a few miles being sometimes enough to double the price of

grain. The average number of seers of rice to be purchased for a rupee during the five years ending with 1901 were: in Sylhet, 13 (= about 39 lb. for 2 shillings); in Kāmrūp, 12 (= about 36 lb. for 2 shillings); and in Lakhimpur, 10½ (= about 31½ lb. for 2 shillings). These five years include two when the harvest was bad, and two when it was distinctly good, and can thus be taken as fairly typical of present rates. Averages for earlier years for the Province will be found in Table V, appended to this article (p. 126).

The ordinary Assamese peasant usually wears home-made articles of dress; the actual cash cost is small, and a woman could probably dress fairly well on Rs. 10 and a man on Rs. 5 per annum. The price of silk clothing is of course considerably higher. A Government orderly spends from Rs. 4 to Rs. 5 a month on his food, including oil, tobacco, spices, salt, and fish. A clerk who shares expenses with one or two friends need not spend more than Rs. 10 a month on food, including a share of the servants' wages, while the messing charge at the Hindu Hotel at Gauhāti is only Rs. 6 a month. The villagers can, as a rule, obtain nearly all the materials required for their houses free of charge; but if payment must be made, a house costs from Rs. 25 to Rs. 50 to construct.

The material condition of the people is satisfactory. There is not much serious debt, the great mass of the population are above the necessity of working for daily wages, and the number of people who are in actual want is very small. In Upper Assam silk might almost be described as the everyday attire of the women, and there are few houses in which gold ornaments cannot be found. The standard of comfort is not high; but, on the other hand, the villagers are able to satisfy their simple wants with the minimum of toil and trouble. The condition of the clerical class is not so satisfactory, and those who have no land sometimes find difficulty in suiting their expenditure to their income. The class of landless day-labourers is very poorly represented in Assam; and a large number of those who returned themselves under this head at the Census were the younger sons of cultivating families, who take service for short periods in order to earn a little ready money. Their manner of life does not materially differ from that of the poor cultivator, and the two classes merge into one another.

Forests. Area and character.

As might be expected from the character of its surface and climate, the area of forest in Assam is very extensive. Government forests are divided into two classes, 'reserved' and 'unclassed' state forests, the latter being the term applied to

all land at the disposal of the state, although a very large proportion of this is bare of timber. On June 30, 1904, the area of the Reserves was 3,778 square miles, and of the 'unclassed' state forests 18,509 square miles, excluding most of the Government waste in the Khāsi and Jaintiā, Lushai, and Nāgā Hills.

The 'reserved' forests of Upper and Central Assam have not been thoroughly explored, and it is possible that they include tracts in which the tree growth is of an inferior character; but the area of Government waste is so large that the need for disforestation has not yet arisen. In the Surmā Valley the conditions are different. There is a keen demand for land for cultivation, and the people are beginning to press upon the soil. To meet this demand, 28 square miles were recently disforested in Cāchār and 67 square miles in Sylhet, as the land contained little valuable timber. In the hills there is less good forest than might be expected, though there is no lack of wooded country. The habits of the hill races do not permit the growth of valuable timber, except in isolated spots to which their shifting cultivation has not extended; and this cultivation and forest fires have denuded the interior of the hills, where the people chiefly live. The most valuable forests are those of Goālpāra, where a large area is covered with *sāl* (*Shorea robusta*). This tree is also found in the Gāro Hills, Kāmrūp, Nowgong, and Darrang.

Outside Goālpāra and Sylhet, all Districts contain extensive areas of mixed and evergreen forest. Here, besides *sāl*, the most valuable timber trees are *tita sapa* (*Michelia Champaca*), *jarul* or *ajhar* (*Lagerstroemia Flos reginae*), *nahor* (*Mesua ferrea*), *sam* (*Artocarpus Chaplasha*), *gomari* (*Gmelina arborea*), *khair* (*Acacia Catechu*), *sissu* (*Dalbergia Sissoo*), and *gunserai* (*Cinnamomum glanduliferum*). *Nahor* does not grow in the western end of the Assam Valley, though common in the evergreen forests of the Gāro and Khāsi Hills; and *sissu* is not found east of the Manās river.

System of management.

The Goālpāra forests were formerly overworked, under a wasteful system of levying royalty on the number of axes employed; and when they came under regular management the stock of exploitable timber was found to be nearly exhausted, though there was still a large supply of young trees. A regular working-plan has now been introduced. Permits are issued to private persons to fell trees, and a certain quantity of timber is extracted by departmental agency. The forests are situated in the north of the District, and some

difficulty is experienced in bringing the logs to market, as the rivers are suitable for transport only at certain seasons of the year. This difficulty has, to some extent, been overcome by the purchase of a portable tramway 6 miles in length. There is also a considerable trade in timber from the permanently settled estates of the District, which lie along both sides of the Brahmaputra, and are thus more favourably situated for purposes of export. The *sāl* forests of the Gāro Hills are valuable, but inaccessible, and it has hitherto been found impossible to work them at a profit on a commercial scale; but there is a considerable trade in canoes hollowed out from large trees which are floated down the Someswari river into Bengal.

In other Districts the only trees of importance as articles of export are *sāl*, *sam*, and *ajhar*, which are floated down the Brahmaputra into Bengal, and from Cāchār into Sylhet, and are chiefly used for boatbuilding. The exploitation of the Cāchār forests for the service of Sylhet has always been active, and is extending, while that of the forests in Goālpāra and Kāmrūp does not show any marked advance. The upper part of the Assam Valley is remote from any market, and its Reserves are hardly touched. Such trade as exists is chiefly in large trees, which are hollowed out and converted into canoes, but of recent years the Assam-Bengal Railway Company have obtained their sleepers from the Nāmbar Reserve. *Simul* (*Bombax malabaricum*) and other kinds of soft wood are largely used in both valleys for the manufacture of tea boxes.

In the Assam Valley trees extracted for sale are felled under a permit specifying their number and name. In Cāchār and Sylhet permits are issued without specifying the quantity or nature of the timber, and royalty is paid at check stations on the river. The trees selected are usually felled early in the year, and the trunk is cut into logs from 6 to 7 feet in length, which are carefully dressed with the axe. They are then rolled along to river banks, where they remain till floating is possible, which is usually near the close of the rains, when no danger from flood is anticipated. Where large logs are extracted, elephants are employed to drag them to stacking stations. The heavier kinds of timber, such as *sāl* and *nahor*, are brought down attached to the sides of canoes. All persons holding land direct from Government are permitted to remove from 'unclassed' state forests, without payment, inferior kinds of timber, bamboos, and other forest produce sufficient for their own requirements. The ordinary royalty is levied on Disposal of produce.

forest produce removed for sale. Free grazing is also allowed in 'unclassed' state forests to all cattle that are not kept for dairy or breeding purposes or for sale. The area of Government waste is so extensive that the villagers have no difficulty in satisfying all their wants, and few causes of friction arise. An officer of the Forest department is stationed in nearly every District, who acts as the Deputy-Commissioner's assistant in forest matters. The management of 'unclassed' state forests in the Assam Valley is in the immediate charge of the subordinate revenue officers, who issue permits for the removal of forest produce. In the Surmā Valley it is entrusted to the subordinate officers of the Forest department. Attempts to protect the forest from fire are restricted to 'reserved' areas and, generally speaking, to forests of *sāl* and other deciduous trees. In 1903-4 special measures were taken with regard to 996·5 square miles, all but 5·3 square miles of which were successfully protected at a cost of Rs. 7,737. In addition, 196 square miles were partially protected; no fires occurred in this area during the year.

Minor products. Rubber.

The most important minor products are bamboos, canes, reeds, thatching-grass, lac, and rubber. The rubber tree (*Ficus elastica*) is indigenous in Darrang, Nowgong, and Lakhimpur Districts, but it has been, to a great extent, killed out by excessive and improper tapping. Duty is levied on rubber collected in Government forests, as well as on that brought into Assam from beyond the frontier. The total amount realized on account of rubber in 1901 was Rs. 93,000. Artificial plantations of *Ficus elastica* have been started at Kulsi in Kāmrūp and at CHARDUĀR in the north of Darrang. Opinions still differ as to the comparative advantages of dense and sparse planting; but in the Kulsi plantation, where there are as many as twenty-seven trees to the acre, the average yield per tree exceeds one pound of rubber.

Lac.

Lac is not only collected from the forests, but a considerable quantity is cultivated by artificial propagation. The chief seat of the industry is in Kāmrūp, the Khāsi and Jaintiā and the Gāro Hills. The lac insect is reared on several species of the *Ficus* family, and the bulk of the produce is exported in the form of stick lac: that is, the small twigs surrounded by deposits of translucent orange yellow gum in which the insect is embedded. Occasionally the gummy matter is scraped from the twigs and separated fron the dead bodies of the insects, which are strained off and sold as red dye. The gum is then melted, cleaned, and sold as shellac or button lac.

The financial results of the Forest department during the past twenty-three years are shown below:—

	Revenue.	Expenditure.	Surplus.
	Rs.	Rs.	Rs.
Average for 1881–90 . .	2,33,487	1,99,488	33,999
" " 1891–1900 .	4,27,610	2,96,557	1,31,053
1900–1	5,63,400	3,42,963	2,20,437
1903–4	6,76,944	4,51,887	2,25,057

Mines and minerals. Coal.

The only minerals in Assam worked on a commercial scale are coal, limestone, and petroleum oil. The most extensive coal measures are those to the south of Lakhimpur and Sibsāgar Districts, which stretch for a distance of about 110 miles along the north-west face of the Nāgā Hills. There are five separate fields, which, running from east to west, are named the Mākum, Jaipur, Nāzirā, Jhānzi, and Disai. The Mākum fields were leased to the Assam Railways and Trading Company in 1881, and a railway was constructed from the Brahmaputra at Dibrugarh to the coal measures on the Dihing. These measures consist of beds of alternating shales, coal, and sandstones. There are altogether five mines worked by the company, which in 1903 employed 1,238 men under the supervision of 9 Europeans. No labour is obtainable locally, and the labour force has to be imported from other parts of India. The ordinary rate of wages is Rs. 7 a month for a man and Rs. 6 for a woman. Work is carried on in galleries run into the side of the cliff, the system employed being that known as the 'square or panel.' The bulk of the coal is taken by the India General and Rivers Steam Navigation Companies for use on their steamers, and a small quantity is sold locally to tea gardens; very little goes to Calcutta. The coal is fairly hard and compact, but after extraction and exposure to the air it breaks up into small pieces. The capital invested in these collieries in 1903 was £357,000. The total output in that year was 239,000 tons, as compared with 147,000 tons in 1891. Small quantities of coal have been extracted from the fields to the south of Sibsāgar District by the Assam and Singlo Companies for use in their own factories, but not for sale. Coal has also been found in the Gāro and the Khāsi and Jaintiā Hills. The deposits in the Gāro Hills are of Cretaceous origin. The principal fields are at Umblay, Rongrengiri, and Darangiri; and for the last-mentioned field a syndicate has taken out a prospecting licence. Cretaceous coal has been found in the Khāsi Hills near Maoflang, about 20 miles south

of Shillong, and at Lāngrin, on the Jādukāta river. The Maoflang field is worked in a primitive way by the villagers for the supply of Shillong station. Deposits of Tertiary coal have been found in the Nummulitic limestone of the Southern Khāsi Hills at Cherrapunji, Lākādong, Thanjinath, Lynkerdem, Maolong, and Mustoh. The Maolong field, which is estimated to contain 15,000,000 tons of coal, has lately been taken on lease by a company. Coal-beds have recently been discovered in the vicinity of the Shillong-Gauhāti road about 11 miles north of Shillong; and there are deposits at Langlei and on the Nāmbar river in the Mīkīr Hills, but the coal is of poor quality and would hardly pay to work.

Limestone. Next in importance to coal are the vast stores of limestone which exist on the southern face of the Khāsi and Jaintiā Hills. It is found from the exit of the Someswari river in the Gāro Hills to that of the Hāri river in Jaintiā, but can be commercially worked only where special facilities exist for its transport from the quarries to the kiln. There are altogether thirty-four tracts which are treated as quarries in the Khāsi and Jaintiā Hills, one in Sylhet, and one in the Gāro Hills. The most important are those situated on the Jādukāta and Panātīrtha rivers, which debouch near Laur in Sylhet, the Dwārā quarries to the east of these, the Shellā quarries on the Bogāpāni, the quarries which lie immediately under Cherrapunji, and the Utma quarries a little to the east on an affluent of the Piyain. The great earthquake of 1897 added considerably to the difficulties that had been previously experienced in transporting the stone to a part of the Surmā river navigable by steamers, and in 1903 only eight quarries were working. The principals are private individuals, the actual quarrymen Khāsis and other local labourers, and no information is available with regard to either the capital invested or the rate of wages paid. The total output in 1903 was 88,675 tons. Limestone is also found in the Mishmi and Mīkīr Hills, and in the bed of the Doigrung, a tributary of the Dhansiri, a few miles south of Golāghāt.

Petroleum. Petroleum is worked only on the Mākum fields in Lakhimpur. As early as 1868 a considerable amount of oil was extracted, but no attempt was made to convert the raw product till a small experimental refinery was erected in 1893. In April, 1899, the Assam Oil Company was formed with a capital of £310,000, and a large refinery was erected at Digboi, which in 1903 gave employment to 10 Europeans and 509 natives. In all, 42 wells have been sunk, of which 22 have

been abandoned. They vary in depth from 600 to 1,833 feet. The most productive well is said to yield about 50,000 gallons a month. The oil is a crude petroleum, rich in paraffin; and the chief products are light naphthas, kerosene, and wax. The total output in 1903 was 63 tons of candles, 573 tons of paraffin wax, 1,200,000 gallons of kerosene oil, and 89,000 gallons of other oil. The oil finds a ready sale locally, but most of the wax goes to England. Petroleum has also been found in Cāchār District at Māsimpur and Badarpur on the bank of the Barāk, and near the Laranga a little to the north of Kālain. At Khāsimāra, on the southern slopes of the Khāsi Hills, springs yield oil which recent analysis has shown to be singularly free from wax and of high lubricating power.

Iron, gold, salt, &c.

Iron is still worked, but to a very small extent, in the Khāsi Hills. It is derived from the minute crystals of titaniferous iron ore, which are found in the decomposed granite on the surface of the central dike of that rock, near the highest portion of the plateau. The iron is of excellent quality, and the industry was formerly one of considerable importance, the metal being exported to the Surmā and Brahmaputra Valleys. Large quantities of iron ore used to be extracted from the coal measures in Upper Assam under native rule, and iron abounds in the Mīkīr Hills. In the time of the Ahom Rājās, gold was regularly washed from many of the rivers in the Assam Valley, but the industry died out with the disappearance of the native system of compulsory labour. In 1894 a syndicate was formed and a considerable sum of money expended on the exploration of the rivers of Lakhimpur District; but gold was not found anywhere in paying quantities, and no return was obtained on the capital embarked in the venture. Salt springs are found in the Upper Assam coal area, and in Cāchār and Manipur.

Platinum has been found in the sands of the Dihing river, and lead and silver in the Khamti Hills. Corundum occurs in the Khāsi Hills, and kaolin in the Gāro and Jaintiā Hills, and also near the Brahmakund at the eastern end of the Assam Valley.

Arts and manufactures. General conditions.

Apart from tea, of which an account has been already given in the section dealing with Agriculture, the Province contains few manufactures of importance. In the Assam Valley and the hills the economic organization of society is of a very simple character. There is no indigenous class of artisans, no specialization of function, and handicrafts which in other parts of India are confined to special castes are practised as household industries. The Surmā Valley has passed beyond the stage

in which the wants of the household are all supplied by the different members of the family; but artisans are scarce, and manufactured products are, as a rule, imported from beyond the frontier. Such as they are, the industries of most importance are the burning of limestone, the weaving of cotton and silk cloth, the preparation of molasses and mustard oil, the making of boats, canoes, and tea boxes, the refining of crude petroleum, and the manufacture of metal and earthen vessels, of rough iron implements, and of native jewellery.

Cotton cloth.

The weaving of cotton cloth is still largely practised by the natives of Assam proper. The work is carried on entirely by women, and in almost every house is to be found a loom, on which most of the clothes worn by the members of the family are prepared; but these articles are chiefly intended for home use, and only an insignificant quantity is produced for sale. Weaving forms one of the most essential parts of a girl's education, and skill in this art does much to enhance the value of a bride. Among the well-to-do, home-made cotton cloths are being displaced by imported goods, and the ladies of the family confine themselves to the production of fine cloths, embroidered and enriched with borders of silk or gold and silver thread. In the Surmā Valley weaving was never a home industry, and was confined to the professional weaving castes; but most of these have now abandoned their traditional occupation for agriculture, and the great mass of the population are clothed in imported fabrics. The hillman's clothing, on the other hand, is usually home made, and the cloths, though rough, are generally dyed a rich blue or red, the necessary ingredients being readily obtained from the surrounding jungle[1].

Silk.

A more characteristic industry of the Assam Valley is the rearing of silkworms and the manufacture of cloth from their thread. There are four varieties of domesticated worm. The smaller or multivoltine *pāt* worm (*Bombyx croesi*) and the larger or univoltine worm of the same name (*Bombyx textor*) are both fed on the mulberry, and produce a fine white thread. The *mūgā* worm (*Antheroea assamoea*) is usually reared on the *sum* tree (*Machilus odoratissima*), and yields a yellowish buff silk with a rich gloss; but if fed on the *chapa* (*Magnolia Griffithii*) and the *mezankuri* (*Tetranthera polyantha*), it spins a very white cocoon. The *eri* worm (*Attacus ricini*) is so called from its attachment to the castor-oil plant (*Ricinus communis*),

[1] For further details see *Monograph on the Cotton Fabrics of Assam* (Calcutta, 1897).

though it also feeds on various other trees. The matrix of *eri* silk is extremely gummy, and the thread has to be spun from the cocoon. The white cloth made of *pāt* silk is an article of luxury, and is not easily procured; but *mūgā* silk is largely used by the women of all classes of society in Upper and Central Assam, and as a holiday dress by men. It is also exported to the Hill Districts, where it is much appreciated by the Khāsis, Gāros, and other tribes. *Eri* cloth is of a drab colour, and, though often coarse in texture, is very durable. It is light but warm, and the ordinary cold-season wrap of the Assamese villager is generally made of this silk. The manufacture of both *mūgā* and *eri* cloth is purely domestic. There are no large filatures, nor any system of breeding the worms on an extensive scale, and all attempts made so far to practise sericulture as a commercial business have ended in failure. The villager rears silkworms enough to yield him a few ounces of thread, which he either gets his women folk to weave or sells at the village fair. In Upper Assam there is not much trade in silk, but in the western Districts the animistic tribes often obtain the cash required for their land revenue by selling *eri* cloth to the Bhotiās and other tribes inhabiting the lower ranges of the Himālayas, or to Mārwāri merchants for export to Calcutta. Proposals have recently been made for the development of the silk industry among the Khāsis and in Manipur.

The jewellery made in the Province does not, as a rule, possess much merit; but really artistic necklaces of gold filigree work are produced at Barpetā, and the enamelled lockets and ear ornaments of Jorhāt are not unpleasing. The enamel, which is usually a rich green or blue, is laid on between thin gold wire on a basis of lac, and is set with cheap garnets and false rubies. The Khāsis wear bracelets, necklaces, and coronets of silver and gold. They are handsome articles, but somewhat heavy in design. The industry is not of any great importance, and is followed by only a few persons, most of whom have some other means of livelihood. Jewellery.

Other manufactures include brass and bell-metal utensils, iron-work, and rough pottery. The articles produced possess no artistic merit, and the local supply has to be supplemented by importation from Bengal. Bell-metal utensils are cast in moulds. Brass vessels are hammered out of thin sheets of that metal. The industry in the Assam Valley is largely in the hands of the Moriās, a class of degraded Muhammadans, who are said to be the descendants of prisoners captured by the Ahoms when Turbak was defeated in 1532. Under native Metal work and pottery.

rule the smelting of iron ore was a considerable industry. The chronicles of the Muhammadan invasions frequently refer to the large numbers of cannon possessed by the enemy, and these guns, some of them of great weight and size, are found scattered over the Assam Valley at the present day. Buchanan-Hamilton, writing at the beginning of the last century, makes mention of a valuable iron-mine south of Jorhāt, and the remains of iron workings are to be seen all over the Khāsi Hills. Iron working, however, like other industries, has died out since the pressure of necessity has been removed, though the Khāsis still smelt small quantities of ore, which they convert into bill-hooks and other implements of agriculture. Other blacksmiths are usually foreigners, who work with imported metal, which they forge into bill-hooks, sickles, and ploughshares; but the industry has few followers and is of little importance. Pottery, which is of the simplest kind, is either made by Kumhārs on the wheel, or by Hiras, who beat out the clay to a thin sheet, and lay one strip upon another till the vessel is complete.

Sylhet specialities.

The most important manufacture of Sylhet, after tea, is lime, which is burnt on the banks of the Surmā river. Other specialities of the District are mats made of bamboo and reeds, boxes and furniture made of reeds, leaf umbrellas, bracelets of shell and lac, *agar* or *attar* (a perfume distilled from the resinous sap of the *agar* tree), children's toys, fish oil, dried fish, and boats. Ironwork inlaid with brass, lac inlaid with feathers and talc, and ivory fans and chessmen used formerly to be manufactured; but these arts are now in a very languishing condition.

Other manufactures.

Of recent years there has been some extension of the mustard-oil and sugar industries in the Province. At Gauhāti two mills, worked by steam, are capable of turning out over 3 tons of oil a day; but oilmen are generally foreigners, who use the ordinary bullock-mill of Upper India. Sugar-cane is still, as a rule, crushed between two wooden rollers, in spite of the superior advantages of the Bihiyā mill, and the juice is converted into raw molasses. Boat-building is carried on in Sylhet; and more than a hundred years ago the Collector of that District built a ship of 400 tons burden, drawing 17 feet when fully loaded. In the Assam Valley canoes are manufactured out of trees, which are hollowed out till only an outer skin about one inch and a quarter in thickness remains. If a large boat is required, the shell is plastered over with mud and steamed over a fire, and the sides are then distended by the insertion of thwarts.

The arts of carving in ivory and wood are almost extinct. Wood-carvers are generally carpenters by profession, and even their best work is usually very rough; carved ivory can only be obtained, on order, at Jorhāt, Barpetā, and Sylhet.

Apart from tea and petroleum, to which reference has been already made, the only industries in which European capital is embarked are saw-mills and the brick and pottery works at Ledo in Lakhimpur District. There were altogether eleven saw-mills in 1903, giving employment to 1,205 persons. The bulk of the output consists of tea boxes, which are generally made from the wood of the *simul* tree (*Bombax malabaricum*). In spite of the large local demand for this commodity, the industry is in a somewhat stagnant condition, as foreign-made boxes are much in favour with the agents in Calcutta. In 1903 the number of persons employed in the pottery works was 149.

Commerce and trade. Trade with the Province prior to annexation.

The first mention of the trade of Sylhet is to be found in the memoirs of Mr. Lindsay, who was appointed Collector of that District in 1778. The principal exports at that time were lime, elephants, iron, silk, coarse muslins, ivory, honey, gums, drugs, and oranges. For the Assam Valley records are fuller, thanks to the Muhammadan invaders. In the seventeenth century the Ahom rulers seem to have adopted a policy of isolation, and forbade people either to enter or leave their territories; and trade was carried on by a caravan, which proceeded once a year to Gauhāti with gold, musk, *agar*, pepper, and silk, and exchanged these products for salt, saltpetre, sulphur, and other articles. At the end of the eighteenth century the trade of the valley was in the hands of two men, who farmed the customs and established a monopoly at Hadira, on the north bank of the Brahmaputra, nearly opposite Goālpāra. On the British side there was a colony of European merchants, who had forcibly seized the monopoly of the trade from Bengal; and unsatisfactory though these arrangements were, the volume of business declined, on the occupation of the Province, owing to the abolition of the monopoly and the bad faith of the individual Assamese merchants. The imports, which consisted almost entirely of salt, were valued at 2¼ lakhs of rupees; the exports at 4½ lakhs, three-fourths of which represented the price of lac, and the greater part of the remainder that of silk, mustard seed, and cotton.

General character of trade.

At the present day, the trade of Assam is carried on in two different directions: first and chiefly with the neighbouring Province of Bengal; and secondly with the tribes on the

northern and eastern frontier. The economic organization of the Province is still very undeveloped; and, apart from tea, the bulk of the exports consists of raw products. The imports include manufactured goods; but as Assam does not produce enough grain to feed its large foreign population, there is also a large importation of food-stuffs. The principal imports are cotton piece-goods and twist, husked rice, salt, sugar, kerosene, mustard and other oils, gram and pulse, tobacco, and metals. The chief exports are tea, unhusked rice, oilseeds, coal and lime, timber, jute, raw cotton, lac, hides, oranges, and rubber. The backward condition of the Province is illustrated by the fact that it exports unhusked rice and oilseeds, and imports husked rice and mustard oil. Nearly all the rice exported goes from the Surmā Valley, which in normal years produces more than is required for local consumption. The imported rice goes to Upper Assam, where the proportion of garden coolies is very large.

Centres of trade. The most important permanent centres of trade are GOĀLPĀRA, BARPETĀ, GAUHĀTI, TEZPUR, NOWGONG, GOLAGHĀT, JORHĀT, DIBRUGARH, and SADIYĀ, in the Assam Valley; and HABIGANJ, AJMIRIGANJ, SUNĀMGANJ, CHHĀTAK, BĀLĀGANJ, SYLHET, and SILCHAR in the valley of the Surmā.

Mechanism of internal trade. None of these places is, however, of great importance, as the tea industry has a very decentralizing effect upon the internal commerce of Assam. All over the Province weekly markets are held on stated days, where buyers and sellers meet, and most of the business is done. The classes who conduct the trade differ in the two valleys. In both, tea, the great export of Assam, is consigned straight from the gardens where it is produced to Calcutta, either to be sold there or shipped to England for sale, though a small but increasing proportion of the crop is now exported from Chittagong, whither it is conveyed by the Assam-Bengal Railway. A considerable share of the export trade in mustard from the Assam Valley is in the hands of a class of traders who are natives of Kāmrūp District; but almost all the rest of the export traffic, and nearly the whole of the import traffic of the valley, is carried on by Mārwāri traders from Rājputāna, who are usually known as Kayahs. There are in addition a few Bengali Muhammadans in the larger towns, who sell furniture, haberdashery, and oilman's stores; but the Kayahs monopolize the banking and wholesale business of the valley, and their shops are to be found not only in the business centres, but on every tea garden and on the paths by which the hillmen bring down their cotton, rubber,

lac, and other products. The Assamese have no commercial aptitude, and have thus allowed the whole of the profits of the trade of their country to pass into the hands of foreigners. In the Surmā Valley the conditions are somewhat different. The native population contains a large trading element, and merchants from Dacca are more numerous than in Assam proper. A fair number of Mārwāris are found, but in no sense do they dominate the trade of the valley.

The hillmen.

Except among the Khāsis and a few of the Nāgā tribes, the number of hillmen who are entirely dependent upon trade for their support is small. Most tribes, however, grow articles like cotton, chillies, and lac for export, and bring them to the markets at the foot of the hills, where they exchange them for rice, salt, dried fish, cloth, and petty oilman's stores. This trade is largely carried on by barter. The tricks of the petty shopkeeper are not unknown; the cotton is often watered to increase its weight, and stones are embedded in the rubber. The Khāsis and Angāmī Nāgās are keen and energetic traders, and sometimes go as far afield as Calcutta in search of goods. Manipur exports rice, timber, and bamboos, and till recently also tea-seed and cattle. Timber and other forest produce are floated down the rivers into Cāchār, but grain and other goods go by cart-road to Dimāpur, a station on the Assam-Bengal Railway.

Trade with other parts of India.

Almost the whole of the trade of Assam with other parts of India is carried on with Bengal, principally with Calcutta, that with other Provinces being less than one per cent. of the whole. The principal exports and imports have already been mentioned, and statistics showing their value will be found in Table VI, appended to this article (p. 127). The great bulk of the goods is still carried by river, though in the Surmā Valley the traffic of the Assam-Bengal Railway is increasing year by year. River-borne trade from the Assam Valley goes chiefly by steamer; but in the Surmā Valley, and especially in Sylhet, country boats are largely employed. There is very little road traffic between Assam and Bengal, and the only commodities brought into the Province by road are cattle, ponies, sheep, and other live-stock.

Trade outside India.

Foreign trade is carried on with Bhutān, Towang, and the tribes inhabiting the Lower Himālayan hills and the eastern end of the Assam Range. The Bhotiās of Bhutān and Towang bring down their goods on sturdy little ponies to fairs held at Darrangā and SUBANKHĀTĀ in the north of Kāmrūp, and at UDALGURI and Ghāgrāpāra in Darrang. The trade is largely

carried on by barter, and the statistics which are collected by the local police and revenue officials must be received with caution. The tribes to the east export little but rubber, which is carried down by coolies, the chief markets being Tezpur, North Lakhimpur, and Sadiyā. Elsewhere the principal imports are rubber, wax, and ponies; the exports, cotton cloth and yarn, and silk. The total foreign trade is, however, worth only about 4 lakhs of rupees per annum.

Means of communication. The Assam-Bengal Railway.

The principal railway of Assam is the Assam-Bengal Railway, which runs from the seaport of Chittagong to Silchar at the eastern end of the Surmā Valley. A second branch of the same line runs along the south of the Assam Valley from Gauhāti to Tinsukiā, a station on the Dibru-Sadiyā Railway, and is connected with the Surmā Valley branch by a line that pierces the North Cāchār Hills, the points of junction being Lumding in the northern and Badarpur in the southern valley. Work was begun on this railway in 1891, and five years later a length of about 115 miles from Chāndurā to Badarpur was opened to traffic; but the hill section presented difficulties of an exceptional character, and was not finally completed till the end of 1903. This section runs for the most part through shale of the worst description, often intermixed with bands of kaolinite, which swells when exposed and causes heavy slips, or exerts immense pressure on the sides of tunnels. To counteract this pressure, very heavy masonry was required, cuttings had to be arched in, and special measures taken to allow the drainage to escape. Though the hill section is only 113 miles in length, it contains 24 tunnels, 7 covered ways, and 74 major bridges, the longest being 650 feet, and the highest 113 feet above the river-bed; while many of the banks and cuttings approach 100 feet in height and depth respectively. Apart from the special engineering difficulties, great inconvenience was experienced owing to the absence of local labour and food-supplies, and to the unhealthiness of the country traversed. At one time, in addition to the railway material, food for more than 25,000 men had to be carried into the hills on elephants, bullocks, ponies, and other pack animals. The result is that the cost of construction of the hill section has been extremely heavy. The principal engineering difficulties in the plains were the bridge, 500 yards in length, which crosses the Kapili and the marshes which fringe its banks; and the bridge over the Barāk at Badarpur, which, though shorter, was even more costly, as its foundations had to be carried 80 feet below the river-bed. The line, which

is on the metre gauge, has a total length within the Province of 571 miles, and has been constructed by a company working under a Government guarantee. The greater part of the capital has, however, been found by Government.

A small line of great commercial importance is that running from the steamer port at DIBRUGARH to MĀRGHERITĀ, with a branch to Tālāp. The total length is only 78 miles; but it taps a large number of flourishing tea gardens, and affords an outlet for the coal and oil of Mākum to the Brahmaputra. It was constructed on the metre-gauge system by a private company, assisted with a Government guarantee, and was opened in 1885. The same year saw the completion of a small state railway in Sibsāgar District, running from Kakilāmukh on the Brahmaputra to Mariāni and Titābar, which was originally built for the convenience of the numerous tea gardens in the neighbourhood, as the unmetalled road to the river became almost impassable to wheeled traffic in the rains. The total length is 30 miles, and the gauge 2 feet. Similar considerations led to the construction of a light railway, on the 2 feet 6 inches gauge, from TEZPUR *ghāt* in Darrang District to BĀLIPĀRA, a distance of 20 miles. The line was built in 1895 by a private company, but receives a small subsidy from the District board. The only other open line in the Province is the branch of the Eastern Bengal State Railway, which connects Dhubri with the Bengal system, and was opened for traffic in 1902. Fifteen miles of this line, which is on the metre gauge, lie within the boundaries of Assam. Minor railways.

Sufficient time has not yet elapsed for the effects produced by the completion of the Assam-Bengal Railway to be fully seen. Silchar, which was formerly extremely inaccessible in the dry season, has been brought within thirty-three hours of Calcutta; and it is hoped that population may pass by the hill section from the densely peopled plains of Sylhet to the extensive tracts of good land now lying waste in the Assam Valley. A line from Golakganj near Dhubri to Gauhāti is under construction, and there will soon be through railway communication between the eastern end of the Brahmaputra Valley and the more densely populated parts of India from which the Province draws its labour. A light railway is also under construction from Divārā Bāzār on the Surmā river to the Maolong coal-field in the Khāsi Hills. Effect of railways.

In 1891 only 114 miles of railway were open in the Province; by 1903 the figure had risen to 715 miles, of which 617 miles represented state lines. The total capital which

by 1903 had been expended on the minor railways, the whole of which lie within the boundaries of the Province—the Dibru-Sadiyā, Tezpur-Bālipāra, and Jorhāt Railways—was Rs. 94,69,000. In that year 567,000 passengers and 317,000 tons of goods and minerals were carried by these railways; the gross working expenses were Rs. 5,95,000, and the net revenue yielded 5 per cent. on the capital employed.

Roads. The excellence of its water communications makes Assam less dependent upon roads than other parts of India, and it was not till 1865 that steps were taken to construct a road through the whole length of the Brahmaputra Valley. This road runs along the south bank of the river from Sadiyā at the eastern end to a point opposite Dhubri, where it is connected by a steam ferry with the road system of Goālpāra and Northern Bengal. At Gauhāti it is joined by an excellent metalled road running to Shillong. Shillong is connected via Cherrapunji, Therriāghāt, Companyganj, and Sylhet with Cāchār, though for a distance of about 8 miles down the face of the Khāsi Hills, which here rise very sharply from the plains, the track is not fit for wheeled traffic. From Cāchār a bridle-path leads to Manipur, and from there a cart-road to the Brahmaputra, passing through Kohīmā, Dimāpur (a station on the Assam-Bengal Railway), and Golāghāt. A second main road runs along the north bank of the Brahmaputra, but through the greater part of its length does not carry much traffic. The principal arteries of trade are, however, the rivers, and since recently the Assam-Bengal Railway, and the most important roads are those leading to the steamer *ghāts* or railway stations. Numerous roads have also been made in the tea Districts, connecting the various plantations with one another and with the main lines of communication, whether water, road, or railway. Apart from the trunk roads, the most important routes are: the road from Turā in the Gāro Hills to the Brahmaputra, the road that runs north from opposite Gauhāti to Darrangā at the foot of the Bhutān Hills, the roads from Rangāmātighāt to the north of the Mangaldai subdivision, the road from Sibsāgar to Disāngmukh on the Brahmaputra, and the Dhodar Alī, which runs along the south-east of Sibsāgar District. In the Surmā Valley two important roads are those from Sylhet to Fenchuganj, and thence to Kulaurā railway station, and from Silchar up the Hailākāndi valley.

Road mileage. Generally speaking, there has not been much change during the past ten years, but the route to Manipur was first made

passable for carts after the outbreak of 1891. The ordinary bullock-carts of Upper India are in common use in the Assam Valley, but here and there carts are still to be found whose wheels consist of solid disks of wood. In the Surmā Valley carts are very scarce, and heavy goods are chiefly carried by boat and to some extent by pack-bullock. A primitive form of wheelless sledge is sometimes used for the transport of agricultural produce. In 1890–1 there were 293 miles of Imperial, 2,119 of Provincial, and 3,095 of Local fund roads; and the cost of maintenance was Rs. 4,70,000. In 1903–4 the figure for Provincial roads was 1,625 miles and for Local fund roads 4,483 miles, and the cost of maintenance was Rs. 8,87,000. Inspection bungalows are provided at intervals of 10 or 12 miles along all the main roads; but they contain nothing but a few tables and chairs and bedsteads, and the occupant must provide servants, food, and cooking utensils. The cost of metalling in Assam is very heavy. This is partly due to the high rate of wages prevailing, partly to the difficulty experienced in obtaining material. In 1903–4 there were only 144 miles of metalled road, most of which lay in the hills. Avenues of trees are not planted along the roads.

Water communications.

The chief means of communication in Assam are still its waterways. The Brahmaputra, which is navigable by large steamers to within a few miles of Dibrugarh, carries most of the trade of the Assam Valley. During the rains tea and other produce are brought down the tributaries that flow into it on either side, though the river ports are always connected by roads with the interior. The Surmā Valley is a network of streams, and during the rainy season the western part of Sylhet District lies almost entirely under water. A large fleet of steamers maintained by the India General Steam Navigation Company and the Rivers Steam Navigation Company plies on the rivers of both valleys. A daily service of passenger boats runs from Goalundo to Dibrugarh. Since the construction of the Assam-Bengal Railway the timing has been accelerated, and the journey up is now performed in four and a half and that down in three and a quarter days; but in the cold season fogs are sometimes a serious obstacle to traffic. A considerable amount of cargo is carried in these vessels; but special cargo steamers with large flats also run, to carry goods the bulk of which renders them unsuitable for carriage by the smaller and more speedy passenger boats. In the Surmā Valley large steamers run to Silchar during the rainy season, but in the cold season cannot proceed beyond Fenchuganj. Small

feeder steamers ply on the minor rivers in both valleys. Ordinary native boats, which, when the wind is not favourable, are generally towed up-stream, are largely used in the Surmā Valley and to some extent in Lower Assam. The typical Assamese craft consists, however, of a canoe hollowed out of a large trunk of wood. Steam ferries are maintained on the Brahmaputra at Dhubri and Gauhāti. Elsewhere, the river is crossed in canoes, or rafts made by fastening two or three canoes side by side and laying planks across them, and in the rains the passage sometimes occupies more than twelve hours. Most of the minor streams on the important roads are bridged, but a large number of ferries have still to be maintained.

Post office. For postal purposes the Province has been formed into a circle under a Deputy-Postmaster-General. The following statistics show the advance in postal business since 1880–1 :—

	1880–1.	1890–1.	1900–1.	1903–4.
Number of post offices	145	276	344	344
Number of letter-boxes	107	195	423	452
Number of miles of postal communication	2,221	3,843	4,230	4,576½
Total number of postal articles delivered :—				
Letters	2,115,436	2,991,462	4,979,070	5,044,936
Postcards	249,895	1,284,826	3,006,531	3,437,122
Packets	52,638	338,876	965,711*	872,586
Newspapers	417,742	755,785	1,049,453†	943,254
Parcels	37,256	74,903	136,406	173,994
Value of stamps sold to the public . Rs.	82,869	2,04,478	2,44,198	2,58,583
Value of money orders issued . Rs.	13,46,130	52,11,700	98,76,590	92,98,498
Total amount of savings bank deposits . Rs.	...	13,99,347	30,74,356	36,28,721

* Including unregistered newspapers.
† Registered as newspapers in the Post Office.

The figures given above relate to both the Imperial post and the local or District post. The latter system was maintained by Local boards to provide postal communication between the head-quarters of Districts and subdivisions and revenue and police stations in the interior, in cases where the maintenance of the necessary lines of communication would not be warranted by the commercial principles of the Post Office. The expenditure from Local funds averaged Rs. 48,000 per annum during the five years ending with 1902–3. The number of District post offices on March 31, 1904, was 58, and the total length of District post mail lines 1,387 miles. In

1906 the whole of this system was transferred to the Imperial post.

Administration[1]. General administrative staff.

The administration of the Province is entrusted to a Chief Commissioner, acting immediately under the orders of the Government of India. His general executive staff consists of (1) the Assam Commission, which has a sanctioned strength of 41, and is composed of members of the Covenanted Civil Service, with a certain proportion of officers deputed from the Indian Army; (2) the Provincial Service, which has a sanctioned strength of 36, and is a body of subordinate magistrates recruited in India, most of whom are natives of that country; (3) the Subordinate Civil Service, which has a sanctioned strength of 52, and consists of native officers, most of whom are employed in the land revenue department.

Government and administrative divisions.

As in other parts of India, the unit of administration is the District, the area in charge of a District Magistrate, or Deputy-Commissioner as he is here called, who is responsible for the collection of the revenue, the administration of justice, the preservation of order, and the harmonious working of all the departments of Government within its boundaries. There are altogether twelve Districts in the Province, with an average area of 4,435 square miles and an average population of 486,823. The six Districts in the Assam Valley have been formed into a Division under the general control of a Commissioner, but elsewhere the Chief Commissioner performs the functions of Commissioner of Division. The District is again divided into subdivisions, of which there are twenty-seven, including two Districts which have none, the average area of each subdivision being 1,971 square miles, and the average population 216,366. The District Magistrate, who is allowed one or more Assistants, holds direct charge of the headquarters subdivision, and each outlying subdivision is entrusted to a magistrate, who is usually a European, subordinate to the Deputy-Commissioner. This magistrate is, however, invested with a considerable measure of responsibility, as within his jurisdiction he exercises, subject to the control of the Deputy-Commissioner, most of the functions of that officer. The smallest unit of administration in the Assam Valley was originally the *mauza*, an area for which an officer called the *mauzadār* contracted to pay the revenue. Between 1883 and 1896 the majority of these *mauzas* were formed into *tahsīls*, which were placed in charge of salaried officers of higher rank,

[1] For the changes made in 1905 in this and the following section, see EASTERN BENGAL AND ASSAM (pp. 1, 9-11).

and which have an average area of 211 square miles and an average population of 47,000. Economy was the principal motive of this change, but experience showed that the reduction in expenditure was not so great as had originally been anticipated. The *mauzadāri* system is popular with the villagers, and has the additional advantage of creating a body of men who, while accepted by the people as their leaders, are bound to Government by the facts of their position. It has accordingly been decided to abolish gradually the existing *tahsīls*, and again entrust the duty of collection to the *mauzadār*. In the temporarily settled tracts the *tahsīldār* or *mauzadār* represents the Government in its most direct and visible form to the mass of the people. Elsewhere in the plains the police are brought most closely into contact with the villagers in rural areas.

Village autonomy.

In the two valleys the houses of the cultivators are scattered over a wide area, and the village organization was never very strong. Some authority was, however, exercised by the rural council (*mel* or *panchāyat*); and, though not recognized by our courts, its decisions are often accepted as binding by the parties concerned. In the hills the authority of the village headmen is greater; they are held responsible for the preservation of law and order, and are empowered to dispose of petty criminal and civil cases. The persons entrusted with the duty of collecting the house-tax, which takes the place of land revenue in the hills, are called *laskars* in the Gāro Hills, *dollois* and *sardārs* in the Khāsi and Jaintiā Hills, and *lambardārs* among the Nāgās.

The various departments.

The Chief Commissioner is further assisted in the administration of the Province by selected officers, who are responsible to him for the various departments committed to their charge. The appointments of Inspector-General of Police, Prisons, and Registration, and Superintendent of Stamps are held by a member of the Assam Commission of the standing of a Deputy-Commissioner. Till recently he was also Commissioner of Excise; but the charge of this department has now been transferred to the Commissioner in the Assam Valley, and to the Chief Commissioner in the Surmā Valley and Hill Districts. Another officer of the standing of a Deputy-Commissioner is in charge of the department of Land Records and Agriculture. Public Works are entrusted to a Superintending Engineer, who also acts as Secretary to the Chief Commissioner in that department, and has under him a staff of Executive and Assistant Engineers and

native subordinates. The Educational department is managed by a Director of Public Instruction, who is assisted by 2 Inspectors, 19 Deputy, and 15 Sub-Inspectors of Schools. The Medical department consists of a Sanitary Commissioner, who is also the Principal Medical Officer of the Assam garrison, 9 Civil Surgeons belonging to the Indian Medical Service, and a certain number of Military or Civil Assistant Surgeons. The Forest department is under the control of a Conservator, assisted by a suitable staff. The civil accounts of the Province are in charge of a Comptroller, who is directly subordinate to the Financial Department of the Government of India. The Post Office is administered by a Deputy-Postmaster-General, and the Telegraph department by a Superintendent. These two officers are not, however, under the orders of the Chief Commissioner.

Native States.

The only Native State of any importance under the control of the Assam Administration is MANIPUR. After the outbreak of 1891, a young boy, who was a member of a collateral line, was placed upon the throne; and during his minority the administration has been conducted by a member of the Assam Commission, who acts as Political Agent and Superintendent of the State. Advantage has been taken of this opportunity to introduce various reforms, and the system of administration has been in some ways assimilated to that prevailing in British territory. The native courts have, however, been retained, and the arrangements for the assessment and collection of land revenue are necessarily of a simple character. The States in the Khāsi Hills are of no importance, and the system of administration does not differ materially from that in force in other Hill Districts.

Legislation and justice. System of legislation.

The ordinary method by which measures of legislation are brought into force in the Province is that common to other parts of India, by which Acts are passed after full debate in the Council of the Governor-General for making Laws and Regulations, which apply to Assam as well as to other parts of the Indian Empire. Provision has also been made for the enactment of Regulations suited to the peculiar necessities of the Province, and the Chief Commissioner is empowered to propose to the Governor-General-in-Council drafts of any such Regulations as seem to him to be required. These Regulations, after they have been approved by the executive Council of the Governor-General, and have received his personal assent, are published in the *Gazette of India*, and thereupon have the force of law. The Chief Commissioner has also power, with

the previous assent of the Governor-General-in-Council, to extend to the Province any measures passed by other local Legislatures which appear to him to be suited to its requirements.

The most important Acts of the Governor-General-in-Council which have come into force in Assam since 1880 are the following:—the Vaccination Act, XIII of 1880; the Labour Immigration Act, I of 1882, which was superseded by Act VI of 1901; and the Civil Courts Act, XII of 1887. The Regulations proposed by the Chief Commissioner which have received the assent of the Governor-General-in-Council are:—the Frontier Tracts Regulation, II of 1880; the Assam Land and Revenue Regulation, I of 1886; the Assam Military Police Regulation, IV of 1890; the Sylhet *Jhum* Regulation, III of 1891; and the Assam Forest Regulation, VII of 1891. The following important Acts of the Bengal Council have also been extended to Assam:—the Public Demands Recovery Act, VII of 1880; the Municipal Act, III of 1884; and the Private Fisheries Act, II of 1889.

Criminal and civil justice.

Stipendiary magistrates are the foundation of the system of criminal administration in the plains, for, though a few honorary magistrates have been appointed, the total amount of work done by them is inconsiderable. Appeals from their decisions lie to the Sessions Judge, except in the case of magistrates with second and third class powers, from whom there is an appeal to the Deputy-Commissioner. In both valleys there is a Sessions Judge, from whom appeals lie to the High Court at Calcutta. Petty civil cases in the Assam Valley are heard by Assistant or Extra Assistant Commissioners, who exercise the powers of Munsifs. Above them come the District Magistrates, who act as Subordinate Judges, while the Sessions Judge is also the Civil Judge of the valley. In Cāchār the same system is in force, the powers of the District Judge of Cāchār being vested in the District Judge of Sylhet. In the latter District civil work is in charge of the District and Sessions Judge, assisted by two Subordinate Judges and a staff of Munsifs. In the Hill Districts and certain frontier tracts the High Court has no jurisdiction except in criminal matters over European British subjects, and the Chief Commissioner is himself the highest appellate authority in criminal and civil cases. The Deputy-Commissioner exercises the combined powers of District and Sessions Judge and Magistrate of a District, and the Assistant Commissioners and Extra Assistant Commissioners the powers of Magistrates and Munsifs. Judi-

cial powers are also exercised by the local chiefs in the Khāsi and Lushai Hills.

Table VII, appended to this article (p. 129), shows the amount of work done by the civil and criminal courts of Assam during recent years. The increase in criminal work is principally due to an increase in the number of cases under special Acts, such as the Labour Acts, XIII of 1859 and I of 1882, the Cattle Trespass Act, the Excise Act, the Municipal Act, and the Police Act. Appeals were preferred in 1903 by rather more than 36 per cent. of the persons on whom appealable sentences were passed in the criminal courts; and 74 per cent. of the appeals to the Sessions Court and 59 per cent. of those to District Magistrates were unsuccessful.

There has been little increase in civil business, except under the head of title and other suits, and rent suits in Sylhet. The great majority of suits are for small sums, and in 1903 the value of about 84 per cent. of the total number instituted did not exceed Rs. 100. It is seldom, moreover, that the claim is disputed, and 79 per cent. of the cases were either withdrawn or compromised, or decided *ex parte*. Appeals were preferred in 1903 against 33 per cent. of the appealable decrees passed by Subordinate Judges and 28 per cent. of those passed by Munsifs, but in only 15 per cent. of the cases heard was the order of the lower court reversed. The readiness of the people to assert their rights can be judged from the fact that 21 per cent. of the appeals to the High Court at Calcutta were for amounts valued at less than Rs. 50.

Registration.

The Inspector-General of Police and Prisons is also Inspector-General of Registration; and he holds besides the offices of Registrar of Joint Stock Companies under the Companies Act, and of Registrar-General of Births, Deaths, and Marriages under Act VI of 1886. All Deputy-Commissioners are registrars in their respective Districts. In the Brahmaputra Valley the sub-registrars are magistrates subordinate to the Deputy-Commissioner, who do this work in addition to their own duties. In the Surmā Valley there are special sub-registrars at the head-quarters of all subdivisions and rural sub-registrars at various centres. The Registration Act is not in force in the hills. The number of documents registered in 1881–90 (average) was 19,700; in 1891–1900 (average), 36,500; and in 1903, 55,400. The number of offices open in the last year was 29. Between 1881 and 1890 the average number open was 21.

Finance.

Little is known about the system of taxation in force in

Taxation prior to British rule.

Sylhet under native rule. It is said that in A.D. 1582 the revenue was assessed at nearly $1\frac{3}{4}$ lakhs of rupees[1]; but Mr. Lindsay, who was Collector there in 1778, reported that under Mughal rule the District yielded little revenue beyond a few elephants, spices, and wood, and most of the local receipts seem to have been devoted to the upkeep of a military establishment to protect the frontier[2]. In 1776 Mr. Holland settled the District for $2\frac{1}{2}$ lakhs, which was paid in cowries at the rate of 5,120 to the rupee; but great difficulty was experienced in realizing this assessment. The rates of land revenue assessed in Cāchār before it lapsed to the Company varied from 10 annas to Rs. 1-4 per acre; and in addition to this the cultivators were expected to provide the labour required for the Rājā's works, while trade was hampered by customs, monopolies, and market dues. The Ahom government was based upon a system of organized forced labour. Each free male above sixteen years of age was styled a *paik*. The *paiks* were grouped in bodies of three or four, termed *gots*, one of whom was always supposed to be engaged on public duty, and was supported while so employed by the remaining members of his *got*. Over each hundred *gots* there was an officer called *saikya*, and over every ten *saikyas* a *hazāri*. The whole population was thus organized either for military or industrial enterprise, and this supply of disciplined labour enabled the Rājās to construct the great public works which remain to be the wonder of an age when coolies can only be procured with great expense and difficulty. Groups of *paiks* were also assigned to the various industries then practised in the Province. The wants of the royal household were supplied by guilds of farmers, silk-weavers, gold-washers, oil-pressers, fishermen, and other artisans. The ministers and the Brāhmans received allotments of land and of peasants to cultivate it, and all adult males were liable to compulsory military service. The people supplied the government and the chief families with everything they required free of cost; and there was thus little necessity for a money tax, though sums were collected in the shape of poll-tax and revenue for land occupied by the peasants in excess of the free grant given to them in return for their service to the state.

Provincial contracts.

The system of Provincial contracts was first introduced in 1871, when Assam formed part of Bengal, and in 1878 the

[1] *Principal Heads of the History and Statistics of the Dacca Division*, p. 292 (Calcutta, 1868).

[2] *Lives of the Lindsays*, p. 163 (1849).

contract with Assam was revised, as it was found necessary to provide funds to meet growing expenditure. The Province received the whole of the revenue from excise, Provincial rates, stamps, registration, law and justice, police, education, and a few minor heads, together with 20 per cent. of the land revenue; while it undertook entire responsibility for the charges pertaining to these departments, and for charges connected with administration and Provincial public works.

The contract of 1882.

In the next settlement—that of 1882—the receipts and charges under excise, stamps, and registration, which had formerly been entirely Provincial, were equally divided between Provincial and Imperial, and similar treatment was accorded to the Forest budget. Sixty-three per cent. of the land revenue receipts was allotted to Provincial, together with a corresponding liability for the charges. The Provincial receipts were estimated to amount to Rs. 44,77,000 per annum, and the normal expenditure to Rs. 43,68,000. A margin was thus left for the growing needs of the administration. During the currency of this contract there was a satisfactory expansion of the revenue, and the additional funds which were thus rendered available enabled the administration to increase the efficiency of nearly every department. Considerable expenditure was incurred on surveys, and on the improvement of the frontier police force. New dispensaries were opened, the construction of the Jorhāt and Cherra-Companyganj State Railways was taken in hand, and a subsidy of a lakh of rupees per annum guaranteed to a company which undertook to build a line between Mārgheritā and Dibrugarh. Large sums were also spent on the improvement of existing roads, the construction of bridges, and the opening out of new lines of communication.

The contract of 1887.

In 1887 the Provincial share of receipts from stamps and excise was altered from 50 per cent. to 75 per cent. and 25 per cent. respectively, an arrangement which was not to the advantage of the Province. On the other hand, Assam received the whole of the land revenue, subject to the deduction of a fixed sum for Imperial needs, and half the revenue obtained under the head of assessed taxes. Grants were, moreover, made by the Supreme Government of Rs. 1,82,500 on account of capital expenditure on the Jorhāt and Cherra-Companyganj State Railways, and of Rs. 6,15,600, which represented the cost of quelling the Lushai outbreak of 1890–1. The settlement provided for an estimated expenditure of 49 lakhs per annum, and the revenues made over were

calculated to bring in exactly this amount. This contract was not favourable to the Assam Administration. There was a fair expansion of revenue under land and forests, but other heads showed a want of elasticity, and in some cases the average receipts fell considerably short of the estimates. The development of the Province was thus hampered by want of funds.

The contract of 1892.

The settlement that came into force in 1892–3 was a consolidated one, and not a collection of separate contracts for each Provincial head. The single contribution to Imperial revenues was fixed at Rs. 11,27,000, and the whole of the land revenue receipts were at first allowed to remain Provincial, though the Supreme Government subsequently appropriated a share of the increase derived from the resettlement of the Assam Valley. During the period of this settlement Assam enjoyed considerable financial prosperity. The revenue was elastic, and no difficulty was experienced in providing for the growing wants of the Province. A special battalion of military police was organized for the Lushai Hills, and considerable sums were spent on the construction of permanent bridges and the improvement of communications.

The settlement of 1897.

The chief feature of the settlement which came into force in 1897 and was extended to March 31, 1904, was the assignment of two-thirds of the land revenue to Provincial needs. The gross ordinary expenditure of the Province was estimated at Rs. 65,29,000, and the receipts at Rs. 66,43,000, the surplus being a set-off against the necessary development of expenditure in a backward Province. The earthquake of June 12, 1897, completely disorganized this settlement. The cost of the damage done was estimated at between 40 and 50 lakhs, to meet which the Supreme Government made a grant of 26 lakhs. The whole resources of the Administration were devoted to the restoration of the Province to the position in which it stood prior to the earthquake, and all thought of progress had, for the time being, to be laid aside. It was, however, found possible to give effect to schemes, which had been for a long time under consideration, for the improvement of the position of the members of the Assam Commission, and of the civil police force.

The settlement of 1904.

A new settlement was introduced on April 1, 1904, and was intended to remain in force[1] until it became unfair either to the Government of India or to the Province. Its principal

[1] These arrangements have been modified in consequence of the formation of a new Province. *See* EASTERN BENGAL AND ASSAM (p. 11).

features are that Assam retains one-half of the revenue from land, stamps, excise, assessed taxes, forests, and registration, and is responsible for half the expenditure under these heads. The Province is also debited with the whole of the expenditure on general administration, courts of law, jails, police, medical, education, political superannuation charges, stationery, and printing, and various minor heads, receiving in turn such revenue as is obtained from these departments. The receipts and expenditure under the heads of civil works and railways also remain Provincial, except in those cases in which railway expenditure is specially provided from Imperial funds. An allotment of 20 lakhs was added to the balance remaining over from the former contract, and, in addition to the shares of revenue assigned, a fixed grant of 12 lakhs is made annually to the Provincial income. Further grants have since been made for the reform of the Police and Education departments. The expenditure at the commencement of the contract was estimated to amount to Rs. 72,07,000.

Statistics showing the principal heads of revenue and expenditure will be found in Tables VIII and VIIIA, appended to this article (p. 130).

Land revenue.

The ordinary land tenures in Assam vary considerably in different parts of the Province; and different systems are in force in Sylhet and Goālpāra, two Districts in which a large proportion of the area is permanently settled, Cāchār, Assam proper, and the Hill Districts. An account of the revenue system peculiar to CĀCHĀR, SYLHET, and GOĀLPĀRA will be found in the articles on those Districts; the following paragraphs deal only with Assam proper and the hills, and with conditions which are more or less common to the Province as a whole.

Assam proper.

The distinguishing features of the agricultural system of Assam proper are the large areas of unsettled waste land, and the system under which in certain tracts land is cultivated for two or three years and then resigned. These two conditions necessitate a simple system of land revenue administration; and, as a matter of fact, the ryot, provided that he pays his land revenue, is subjected to no harassing restrictions. He holds an annual or decennial lease from Government, and is free to relinquish the whole or any part of his holding, provided that notice is given to the revenue officers at the proper time. Decennial leases confer a right of resettlement and a heritable and transferable title. Annual leases merely authorize the occupation of the land covered by them for a single year, though in practice the holder can always obtain

resettlement if the land is not required by Government. Any unoccupied waste land may also be taken up for cultivation without notice or application, and, when so taken up, is settled with the occupant; but a prior claim to resettlement may be secured by filing an application for it. Large areas of land are annually relinquished and taken up in this way in those parts of the valley where fluctuating cultivation is practised. A strong revenue staff is maintained in each District, whose principal functions are to survey and issue leases for the land newly taken up, to test the applications filed for relinquishment, to correct the revenue roll, to record the areas under different crops, and to assist in the collection of the land revenue. The country is divided into circles, as the charge of the local accountant or *mandal* is called, which comprise, as a rule, about 5,000 acres. Over every 20 or 25 *mandals* there is an officer known as a Supervisor *kānungo*, who is continually testing their operations in the field, and supervising their work when they come in to head-quarters, while above the Supervisor *kānungo* comes the Sub-Deputy-Collector, who, under the existing rules, is required to be a graduate of a University, and to have a good practical knowledge of surveying. Most of the *tahsīls*, or units for the collection of land revenue, are now in charge of officers of this class; and there are in addition one or two in each subdivision who are in general charge of settlement work, but have no concern with the land revenue collection.

Revenue assessment under Native and British rule.

The organization of the Assamese into small bodies, or *gots*, consisting of three or four individuals styled *paiks*, one of whom was always employed on the service of the State, has already been described on page 98. Each *paik* was allowed sufficient land for his homestead, and $2\frac{2}{3}$ acres of rice land free of revenue, but was required to pay 12 annas an acre for anything taken up in excess of this quantity, in addition to a poll-tax of one rupee. The revenue was farmed to *chaudhuris*, and the nominal rate assessed was only Rs. 2 a 'plough,' an area which, according to Buchanan-Hamilton, produced about 56 cwt. of 'rough rice' and 11 cwt. of mustard-seed. Little control was, however, exercised over the revenue farmers, and their exactions raised the rate to about Rs. 7 per 'plough'; while north of the Brahmaputra the demands of the hill tribes, who, with the break up of the Ahom system of administration, established a sort of right to the levy of blackmail, deprived the villagers of the whole of the profits of cultivation.

As soon as the British took possession of the country the

system of forced labour was abolished, but the poll-tax was raised to Rs. 3 per head, subsequently commuted to a land revenue assessment. The rates varied at different times and in different portions of the valley, but in 1853 they ranged from Rs. 1-3 to 10 annas per acre of cultivated land[1]. In 1870 the rates per acre were fixed as follows: homestead, which includes the garden surrounding the house, Rs. 3; transplanted rice land, Rs. 1-14; and other land, Rs. 1-8. The next settlement was made in 1893 for a term of ten years. The threefold classification of land was retained, but the villages were roughly divided into four classes, and the revenue assessed on each of the three kinds of land depended upon the class in which the village fell. The main consideration taken into account in fixing the class of the village was the demand for land, as shown by the density of population and the proportion of settled to total area. No distinction was drawn between the good and inferior land of the same class in a village, and the assessment never pretended to anything like scientific accuracy. The rates assessed per acre were: homestead, Rs. 4-2 in first-class villages to Rs. 3 in villages of the fourth class; transplanted rice land, Rs. 3 to Rs. 1-14; and other land, Rs. 2-4 to Rs. 1-8. The proportion of villages placed in the lowest class was very small, and full revenue is paid on all settled land whether cultivated or not, except in the case of land held on half rates. A detailed resettlement of two Districts, on principles similar to those which are followed in other parts of India, was commenced in 1902. The village has been abandoned as the unit of assessment, and steps are being taken to distribute the revenue more closely in accordance with the value of the actual field. A considerable area of land is held either revenue free or at half full rates. These estates represent grants made by the Ahom Rājās for religious and other purposes. In 1903-4 the total settled area of Assam proper was 2,562,000 acres, the area of land held at half rates being 189,000 acres, and of land held revenue free 81,000 acres.

Rules for the grant of land on favourable terms.

The tea industry has played a large part in the development of Assam, and from time to time different rules have been in force to govern the grant of land for the cultivation of this plant. The earliest rules, those of 1838, applied only to Assam proper. One-fourth of the grant was to be held revenue free in perpetuity, and a revenue-free period of from

[1] *Report on the Province of Assam*, by A. J. Moffatt Mills; Darrang, p. xiii; Lakhimpur, p. 1 (Calcutta, 1854).

five to twenty years was allowed on the remaining three-fourths, according as the land was under grass, reeds, or timber, after which light but progressive rates were imposed. The rules of 1854, which were extended to the Surmā Valley, introduced certain modifications; but the bulk of the land taken up when they were in force was subsequently acquired in fee-simple, when the fee-simple rules were introduced in 1862. Under these rules the land was sold free of all revenue demand, the price charged varying from Rs. 2–8 to Rs. 10 an acre. There are now 332,000 acres of land in the Assam Valley held on this tenure. The existing rules came into force in 1876. An upset price of R. 1 an acre is charged, and for two years the land is allowed to remain revenue free. The rates gradually rise to 8 annas an acre in the eleventh and R. 1 in the twenty-first year. The lease runs for thirty years, and when it expires the land is liable to reassessment.

In the Assam Valley the issue of leases on favourable terms has never been allowed when the land is required for the cultivation of the ordinary staples of the Province. In Cāchār this restriction was not in force, and waste land was let out at progressive rates with a revenue-free term, for ordinary as well as for special cultivation. The rules varied from time to time, but the leases were granted for twenty or thirty years, with a revenue-free period of from two to three years. The maximum revenue assessed during the concluding portion of the lease varied from 12 annas to Rs. 1–8 an acre. These rules are no longer in force, and waste land taken up for ordinary cultivation during the currency of the settlement in Cāchār is assessed at the rates levied on similar land in the neighbourhood.

The ordinary form of taxation in the Hill Districts is a tax of Rs. 2 or Rs. 3 on each house, and no attempt is usually made to measure up the area of land actually occupied.

General considerations.

In Upper Assam the villagers find a ready market for their produce in the numerous tea gardens situated in this portion of the valley, and here the assessment made in 1893 is paid without much difficulty. In Lower and Central Assam the tea industry is of small importance, and the people suffered severely from the earthquake of 1897 and the floods which followed it, and from the terrible mortality caused by *kalā azār*. The Government of India accordingly directed in 1901 that the land revenue demand in this portion of the valley should be reduced by Rs. 1,80,000. Widespread famine or scarcity is unknown, but floods sometimes cause considerable local

damage, and rules for the remission of land revenue have been introduced to afford the relief which is rendered necessary by such visitations. The area of waste land in the Province is so large that no necessity has yet arisen for checking the freedom of the ryot to transfer his land. The receipts under the head of land revenue will be found in Table VIII, appended to this article (p. 130).

The original system of land revenue collection in Assam was one under which an individual of some wealth and local standing, called a *mauzadār*, entered into a contract with Government to pay the land revenue of one or more *mauzas*, or fiscal divisions. The contract was formerly made for a term of years, and the *mauzadār* enjoyed such profits as accrued from the extension, and made good any loss due to the decrease, of cultivation; but for the last fifty years the settlement has been revised annually, and the revenue collector has been rewarded by a liberal commission, which is supposed to compensate him for bad debts and other expenses. Of recent years *mauzas* have in many cases been grouped together to form *tahsīls*, in which about a lakh of rupees is realized direct from the ryots by a Government officer who receives a fixed salary, and pays into the treasury only the amount he actually collects. Difficulties have, however, been experienced in dealing direct with such large bodies of cultivators, and it has been decided gradually to abolish *tahsīls*, and to entrust the duty of collection once more to the *mauzadār*. The cost of collection is equivalent to about 5 per cent. of the demand in *tahsīls*, and 7 per cent. in *mauzas*. If a cultivator fails to pay on the appointed date, a notice of demand is served upon him. This, as a rule, has the desired effect, but in cases of recusancy the movable property of the defaulter, and even the land itself, can be attached and sold. The amount of revenue for which such extreme measures are taken is, however, less than one per cent. of the Government demand.

Collection of land revenue.

The cultivation of opium is said to have been introduced into Assam in the reign of Lakshmī Singh, about 1770[1]. If this was so, the practice of opium-eating must have spread with great rapidity, as from Buchanan-Hamilton's memoir it appears that in 1808 the drug was freely used by the Assamese. Consumption was unduly stimulated by the ease with which opium could be obtained, the effect upon the people was far from satisfactory, and in 1860 the cultivation of the poppy was

Miscellaneous revenue. Opium.

[1] *Report on the Province of Assam*, by A. J. Moffat Mills; Sibsagar, p. 75 (Calcutta, 1854).

prohibited. Supplies of opium are now received from the Board of Revenue, Bengal, and issued to licensed vendors from the Government treasuries. Opium is still largely consumed in Assam proper, more particularly in the two Districts of Sibsāgar and Lakhimpur, which in 1903-4 took considerably more than half the total amount used in the Province; but the restrictive policy of the Government has had a most marked effect upon consumption. The original duty levied in 1860 was Rs. 14 per seer; but this was raised by successive enhancements till in 1890 it was fixed at Rs. 37 a seer, at which it now stands. In addition to raising the price of the drug, which is often sold retail for as much as 10 annas a *tola* (about 2*s*. an ounce), the Government has reduced the number of shops at which it can be obtained from 5,070 in 1873-4 to 752 in 1903-4. A further tax is placed upon the trade in the shape of licence fees. Prior to 1874, licences for retail vend were issued free of duty. In 1903-4 the amount paid to Government on account of licence fees alone was no less than Rs. 3,44,000. This heavy increase in the cost of the drug, combined with an increase in the land revenue and a growing taste for imported goods, which tends to relieve the ryot of his surplus cash, has produced a remarkable decrease in consumption. In 1864-5 the total amount used in the Assam Valley was 1,939 maunds; in 1903-4 it was only 1,266 maunds. The revenue obtained from this head of excise is large. Between 1881 and 1890 it averaged Rs. 16,56,000 annually, rising in the next decade to an average of Rs. 18,75,000. In 1903-4 it was Rs. 18,65,000. In addition to imposing a high rate of duty, the Government attempts to restrict consumption by prohibiting the sale of more than five *tolas* (2 ounces) at a time to one individual, and by forbidding the vendor to give the drug in exchange for rice or other goods.

Country spirits.

The revenue from country spirits is raised on the out-still system. The sites of the shops are fixed by Government, and the right to manufacture and sell country spirits at these places is put up to auction. Local opinion is consulted before a new shop is opened, and existing stills are closed if it is shown that they offer undue temptations to the drink-consuming classes. It has, however, been proved that the mere abolition of shops does not put a stop to drinking, but merely substitutes home-made for excise liquor; and the Government, in its efforts to restrict consumption, has constantly to bear this fact in mind. With the object of improving the excise administration, efforts are being made to introduce the central distillery system,

which enables some supervision to be exercised over the quality of liquor produced. The limit of retail sale is 3 quarts; and a minimum price has been fixed of 6 annas a quart, except in the Khāsi Hills, where it is 8 annas. Country spirits are chiefly consumed by imported coolies, and the receipts under this head are highest in those Districts where imported coolies are most numerous. The average annual revenue rose from 2 lakhs in the period 1881–90 to 4·8 lakhs in the following decade; in 1903–4 the receipts were 7·08 lakhs. The expansion of the revenue is due to the growth of the foreign population, and to greater vigilance and efficiency in the excise administration. The hillmen and unconverted tribes and many of the garden coolies consume large quantities of home-made rice-beer, but no attempt is made to levy duty on this liquor.

Gānja. *Gānja* is imported from Rājshāhi District in Eastern Bengal, under bond by warehouse keepers, and is issued from their stores, on payment of duty, to the persons who have purchased the right of retail vend. The revenue has expanded *pari passu* with the growth of the foreign population; the receipts averaging 2·2 lakhs between 1881 and 1890, and 3·3 lakhs during the next ten years. In 1903–4 the income under this head was 4·28 lakhs. The drug is in little favour among the Assamese, and the great majority of the consumers are either foreigners or natives of the Surmā Valley.

Imported liquors. In comparison with other sources of revenue, the receipts from imported liquors are inconsiderable, amounting to only Rs. 18,869 in 1903–4. The use of spirituous liquors is believed to be spreading among the more advanced sections of the native community; but the total quantity consumed by them is small, and country-made liquor still holds its own among the mass of the drinking population.

The incidence of total excise revenue per head of population was: in 1880–1, 6 annas 4 pies; in 1890–1, 7 annas 2 pies; and in 1903–4, 8 annas 5 pies.

Stamps and income-tax. The following abstract shows the average net receipts under the head of judicial and non-judicial stamps and income-tax, in thousands of rupees:—

	Average, 1881–90.	Average, 1891–1900.	1903–4.
Judicial stamps . .	5,17	6,07	7,09
Non-judicial stamps .	1,97	2,33	2,74
Income-tax* . .	2,09	2,73	2,48

* From 1887 only.

There has been a considerable development in the stamp revenue; and this is generally considered to be an indication of the prosperity of the people, as they are only too prone to spend their surplus resources in litigation. An increase in the sale of non-judicial stamps is a sign of prosperity or the reverse, according as a recourse to borrowing is regarded as the result of the extension of trade or of straitened circumstances. The greater part of the income-tax is realized from the salaries paid to Government servants or to the managers and assistants on tea gardens. The incidence of the tax per head of population in 1903-4 was 8 pies, and the number of assessees per 1,000 was 0·6.

Local and municipal. History of local self-government.

Prior to 1879, the only funds expended under local control in Assam were certain Provincial grants, and in the Districts of Sylhet and Goālpāra the rates levied under the Bengal Road Cess and Zamīndāri Dāk Acts. These allotments were managed by the District Magistrate, with the assistance, in the case of roads and education, of special road fund and education committees. In 1879 a Regulation was passed, providing for the levy of a local rate, and the appointment of a committee in each District to control the expenditure on roads, primary education, and the District post. Three years later the District committees were abolished by executive order, and their place was taken by boards established in each subdivision, which are the local authorities in existence at the present day. The Deputy-Commissioner is chairman of the board of the head-quarters subdivision, and each of the other boards in the District is presided over by the subdivisional officer. The Local boards are entrusted with the maintenance of all roads within their jurisdiction, except a few main lines of communication, the provision and maintenance of staging bungalows and dispensaries, and the supervision of village sanitation and vaccination. They are also in charge of primary education, subject to the general control of the Educational department, and are empowered to make grants-in-aid to schools of higher grade, subject to certain rules. For these purposes, they have placed at their disposal the rate which is levied under the Assam Local Rates Regulation of 1879, at the rate of one anna per rupee on the annual value of lands, as well as the surplus income of pounds and ferries, and some minor receipts. This income is in most cases supplemented by an annual grant from Provincial funds, the amount of which is fixed for a term of years. The principal heads of income and expenditure are shown in Table IX, appended to this article (p. 131).

Local boards.

The annual budgets of the boards are submitted to the Chief Commissioner for sanction. The estimates for all works costing Rs. 500 or more must be approved by the Public Works department, and important works, requiring much professional skill, are made over for execution to that department. Less important works are entrusted to the board overseers, and in the tea Districts much assistance is usually rendered by planters in the repair of roads and bridges.

Constitution and work done.

In 1903-4 there were 19 Local boards in the Province, consisting of 364 members, of whom 60 were *ex officio*, 171 nominated, and 133 elected. In Districts where the tea industry is of importance, a certain proportion of the members are planters, who are elected by the planting community. Under a system recently introduced, the majority of the native members will also be elected. In 1903-4 of the members of the various boards, 132 were Europeans; and the existence of this strong European element and the comparatively small area entrusted to their charge imparts to the Local boards of Assam a degree of vitality not always found in the self-governing institutions of other parts of India. Some of the largest works constructed by them during the past ten years were as follows: bridge over the Disai river on the Dhodar Alī in the Jorhāt subdivision, cost (in round figures) Rs. 67,000; Gauripur-Rahā road in Goālpāra District, cost Rs. 2,23,000; Sylhet-Muktapurghāt road in North Sylhet subdivision, cost Rs. 1,09,000; Sunāmganj-Paglā road in Sunāmganj subdivision, cost Rs. 1,04,000. Large sums in the aggregate have also been spent on the improvement and repair of the existing lines of communication, the construction of bridges, wells, and roads of less importance than those mentioned, and the maintenance of charitable dispensaries. Serious failure of the harvest occurs so seldom in Assam that Local boards are hardly ever called upon to administer relief, but a small sum was distributed in Sylhet in 1902.

Municipalities.

Only fourteen urban areas in Assam are administered under some form of municipal law; and the average population of each of these places at the Census of 1901 was only 6,784, ranging from 16,893 in Sylhet to 2,359 in Golāghāt. (Bengal) Act III of 1884 is in force in Sylhet, Gauhāti, and Dibrugarh, the only towns in the Province which contain more than 10,000 inhabitants within municipal limits, and in the small town of Dhubri. The remainder are administered under (Bengal) Act V of 1876, an Act which is also in force in two 'stations' and three 'unions.' The total strength of the

fourteen committees in 1903-4 was 141 members, of whom 47 were elected, while 70 were nominated and 24 held office *ex officio*. Fifty of the total number were officials and thirty Europeans. The Deputy-Commissioner or subdivisional officer is chairman of the municipality at head-quarters, except in the case of Sylhet town, but the vice-chairmen are elected by the commissioners and are usually non-officials. The little towns in Assam are often of great extent, and include semi-urban and almost rural areas. Conservancy, water-supply, and drainage are thus difficult and expensive, and the length of the roads necessitates a large expenditure, especially where metalling is involved. Generally speaking, however, a reasonable standard of efficiency is maintained. The incidence of municipal taxation in 1903-4 was Rs. 1-4 per head; but the towns receive substantial grants from Government, and the average income per head was more than double this amount.

The most important public works in municipal areas are the water-works at Gauhāti and Shillong. At Gauhāti water is pumped from the Brahmaputra to the top of a hill, and thence distributed all over the town. Since these works were completed in 1887, there has been a marked improvement in the health of the place. In Shillong the water of the hill streams is distributed in pipes over the station.

Statistics showing the principal items of municipal income and expenditure will be found in Table X, appended to this article (p. 131).

Public works. Staff.

The Public Works department in Assam is directed by a Chief or Superintending Engineer, who is also Secretary to the Chief Commissioner, aided by an under-secretary. The executive staff comprises twelve Executive and Assistant Engineers and two temporary Engineers. Public works in the Lushai Hills are in charge of a District Engineer, who is an upper subordinate of the Public Works department, and works under the orders of the Superintendent of the Lushai Hills. The accounts of Imperial, Provincial, and Local works are examined and audited by an Examiner. All Provincial works, such as the construction and maintenance of the main lines of communication, and the erection and repair of all Government buildings of any size and importance, are directly under the department. As has already been explained, Local works involving much engineering skill are usually made over to the Executive Engineer for execution, and estimates exceeding Rs. 500 in value are submitted for professional approval.

The principal works completed by the department prior to 1890 were: the south trunk road from Dhubri to Sadiyā, 456 miles, completed in 1877; the north trunk road from Dhubri to North Lakhimpur, 326 miles; metalled road from Gauhāti to Shillong and from Shillong to Cherrapunji, 97 miles; road from Sylhet to Cāchār, 67 miles; road from Golāghāt to Nichuguard, at the foot of the Nāgā Hills, 63 miles; Jorhāt State Railway, 30 miles; and Companyganj-Therriāghāt State Railway, 8 miles. It was originally intended to carry this line up the face of the hill to Cherrapunji, but the cost was found to be prohibitive. It was wrecked by the earthquake of 1897, and has since been abandoned.

The principal works constructed since 1890 have been the Nichuguard-Manipur road, constructed from Imperial revenues at a cost of 28½ lakhs; and the Companyganj-Salutikar road, a section 9 miles long of the line of communication between Sylhet and Shillong. The latter runs across the line of drainage of the country, and, as the rainfall in this part of the District is extremely heavy, its construction was attended with serious difficulties. The cost of the road embankment was Rs. 1,41,000, and of the bridges Rs. 1,37,000; they were, however, seriously damaged by the earthquake and by flood, and have been reconstructed at a cost of Rs. 1,88,000. Considerable sums have also been spent on the Aijal-Silchar and Aijal-Lungleh roads, and the Maulavi Bāzār-Manumukh road. Some of the largest bridges constructed by the Public Works department are those over the Krishnai and Singrā rivers on the south trunk road, and over the Digru between Shillong and Gauhāti. The cost of each was between three-quarters of a lakh and a lakh of rupees. Since 1897, the resources of the Province have been largely devoted to the restoration of buildings destroyed by the earthquake. The most expensive have been: The Secretariat Press, cost Rs. 1,27,000; Government House, Shillong, cost Rs. 1,91,000; Sylhet Collectorate, cost Rs. 1,68,000; and Sylhet Jail, cost Rs. 1,86,000. Other important works have been the Aijal water-works, cost Rs. 1,36,000; and the Manipur cantonments, estimate Rs. 6,56,000. Principal works.

Assam is comprised in the Lucknow division of the Northern Command. The military stations in 1904 were: Dibrugarh, Kohīmā, Manipur, Sadiyā, and Shillong. The total strength of the British and Native army stationed within the Province on June 1, 1903, was 2,227, of whom 58 were British. Army.

There are volunteer corps, with head-quarters at Silchar, Dibrugarh, Lumding, and Shillong; their strength in 1903

was 731, of whom 637 were light horse or mounted rifles. In the Assam Valley separate volunteer corps were originally started in each District, the first to be enrolled being the Lakhimpur corps in 1882. In 1891 the mounted infantry in the four upper Districts of the valley were formed into one corps under the designation of the Assam Valley Mounted Rifles, and five years later were converted into a body of Light Horse, which in 1903–4 had an efficient strength of 349. A volunteer corps was started in Sylhet in 1880 and in Cāchār in 1883, and the two were subsequently amalgamated into the Surmā Valley Light Horse, which in 1903–4 had an efficient strength of 270.

Police and jails. Police.

The police force of the Province consists of civil police, rural police or village *chaukīdārs*, and military police. Under native rule there seems to have been no police administration, as we understand the term, and even in 1853 the total force employed in the Assam Valley was only 547 men. The numbers were, however, rapidly increased; and in 1874, when Assam was separated from Bengal, the civil police consisted of 3,452 men. The development of the military police rendered it possible to reduce the other arm of the force, which in 1903 consisted of 384 officers and 2,289 men, showing one policeman engaged on the prevention and detection of crime to every 20 square miles and every 2,185 persons. The corresponding figures for rural police in the three Districts in which alone they are employed were 2 and 458 respectively. The present sanctioned scale of superior officers is 6 District Superintendents and 11 Assistant Superintendents. Under the revised scale there will be 10 of the former and 5 of the latter.

Recruitment and training.

For ordinary constables strong young men between 18 and 25, who are able to read and write, are selected as recruits. If required for the armed police, the selection is generally restricted to up-countrymen or members of the aboriginal tribes. Appointments to the grade of sub-inspector are occasionally made from the rank and file of the force, but the usual procedure is to select probationers from the list of approved candidates, who are drawn from a superior social position. Head constables and constables are trained by their immediate superiors; probationary sub-inspectors are placed under the orders of a selected inspector, and are not confirmed until a satisfactory report has been received of their conduct and capacity. The rural policeman is required to report all serious crime to the officer in charge of the police station within which his village is situated, to arrest persons com-

mitting such crimes in his presence, to collect vital statistics, to observe the movement of bad characters, and generally to inform his official superiors of anything likely to affect the peace and good administration of the District. Rural police are not employed in Assam proper, as there is little serious crime in that portion of the Province, and the *gaonbura*, or village elder, gives such assistance as is necessary. Educated natives used formerly to object to taking service in the department. The position and the moral tone of the police have, however, been improved of recent years, and the competition for ministerial appointments is now so keen that young men of good family are glad to accept nominations to the sub-inspector grade. The pay of the ordinary constable is not, however, sufficient to attract or retain a good class of recruit, and the readiness with which the men resign is a serious obstacle to the efficient management of the force.

A system of anthropometry was introduced into Assam in 1893, but was superseded in 1898 by the system of identification from finger-prints. The civil police are at present armed with smooth-bore Snider carbines, but bored-out Martini-Henry rifles will shortly be issued in their place. The strength of the civil and military police force is shown in detail in Table XI (p. 132). The average number of criminal charges dealt with by the police during the five years ending 1901 may be classified as follows: Investigated, 9,971; tried in court, 5,251; ending in acquittal or discharge, 993; ending in conviction, 4,052.

Military police. Prior to 1878, there were three separate bodies of quasi-military police in the Nāgā and Gāro Hills and in the Surmā Valley; but in 1878 the frontier police were formed into a separate force, and detachments stationed in each District. In 1882 the Assam Military Police Regulation came into operation; and in 1903 the force consisted of five battalions, with a strength of 2,870 officers and men. The head-quarters of the battalions are at Aijal in the Lushai Hills, Silchar, Kohīmā in the Nāgā Hills, Turā in the Gāro Hills, and Dibrugarh; but during the cold season the military police hold thirty-six outposts, the majority of which are intended to keep in check the hill tribes on the frontier. The force has recently been rearmed with Martini-Henry rifles, and the officers commanding the four battalions at Silchar, Aijal, Kohīmā, and Dibrugarh are all military men. The military police form a valuable fighting force, and have taken part in the Manipur, Lushai, Abor, Apa Tanang, and Mishmi expeditions, where they served

with credit. Railway police are employed only on the Assam-Bengal Railway and the Jorhāt State Railway. The total strength on these two lines consists of 3 officers and 51 head-constables and men.

Jails. The jails at Shillong and at the head-quarters of six plains Districts are District jails, as distinguished from the subsidiary jails at all the plains subdivisions except Hailākāndi and Barpetā, and at Dhubri, Nowgong, Kohīmā, Turā, and Aijal. Of the former class there were 7 in 1903, of the latter 17. The largest jails are those at Sylhet, which had a daily average population of 414; Tezpur, daily average 210; Gauhāti, daily average 249; and Dibrugarh, daily average 110. European prisoners can be confined in these jails, provided that the term of imprisonment does not exceed one month. Prisoners are not, as a rule, confined for more than six months in subsidiary jails, and convicts sentenced for longer terms are generally transferred to a District jail. The jail mortality has usually been high in the Assam Valley, but in this respect it has not differed from that which prevails in the Province as a whole. The most prevalent diseases are dysentery, diarrhoea, and fever, and there are occasional outbreaks of cholera. The jail industries are not of great importance. They include the making of cane and basket-work furniture, the weaving of prison clothing and rough cloth, rice-husking, pressing of mustard oil, and gardening. At one time prisoners were largely employed on extra-mural labour; but this system has been, to a great extent, abandoned of recent years, as it tends to a relaxation of discipline. The larger jails are in charge of the civil medical officers of the Districts in which they are situated. The chief statistics with regard to the jails of the Province are shown in Table XII, appended to this article (p. 132).

Education. Early history. Under native rule very little attention was paid to education, and it is said that in 1838 there were barely thirty educated people in the District of Nowgong[1]. The Province was subsequently incorporated in the charge of an Inspector, Mr. Robinson, who in 1841 reported[2] that the state of education in the Brahmaputra Valley was 'deplorable in the extreme,' while fifteen years later he calculated that in the whole of his division, which included several Districts of Bengal, there were only 13,300 boys under tuition out of 1,262,000 children of

[1] *Report on the Province of Assam*, by A. J. Moffatt Mills, p. 26 (Calcutta, 1854).

[2] *A Descriptive Account of Assam*, by W. Robinson, p. 277 (Calcutta, 1841).

school-going age. By 1856 English schools had been established at Sylhet and Gauhāti, 7 Anglo-vernacular schools in Sylhet, all of which were closed in the following year, 3 in Cāchār, and one in Goālpāra, and a Government vernacular school at the head-quarters of each of the five Districts of Assam proper. In the Brahmaputra Valley these were supplemented by schools in the villages, which had nearly 4,000 pupils, though the system of tuition was far from satisfactory; but even as late as 1868 less than 1,500 children were under instruction in the Surmā Valley[1], though the total population must have been about two millions. The earliest year for which it is possible to obtain statistics for the Province as a whole is 1875. By that time the system initiated by Sir George Campbell of encouraging indigenous institutions by the offer of grants-in-aid had begun to take effect, and the number of schools had risen to 1,193 and of scholars to 30,000. In 1903–4, 3,232 educational institutions existed, and 106,000 persons were under instruction. The department is now under the control of a Director of Public Instruction, an officer recruited from England, who is assisted by a staff of Inspectors, Deputy-Inspectors, and Sub-Inspectors of Schools.

After the closing of college classes at Gauhāti in 1876 the Province was without any form of University education, and to meet this defect thirty-six scholarships for sums varying from Rs. 25 to Rs. 10 a month were allotted to boys who passed the Entrance examination with most credit. These scholarships were tenable for two years at any of the affiliated colleges in Bengal, and were extended for a further period if the holders passed the First Arts Examination satisfactorily. In 1892 the Murāri Chand second-grade unaided college was opened at Sylhet. It was founded and is maintained by a *zamīndār* of that District, Rājā Girish Chandra Roy, and teaches up to the First Arts standard, the full college course occupying two years. In 1901 a Government second-grade college, called the Cotton College, was opened at Gauhāti. The buildings have been designed on liberal lines, and include an excellent library and laboratory, and separate hostels for Hindus and Muhammadans. During the twelve years ending 1900 the degree of B.A. of the Calcutta University was obtained by 68 natives of the Surmā Valley, 29 of the Brahmaputra Valley, and 2 of the Hill Districts. In the same period 21 persons educated in Assam obtained the M.A. degree.

College education.

[1] *Principal Heads of the History and Statistics of the Dacca Division*, pp. 326 and 365 (Calcutta, 1868).

Secondary education. Secondary education is imparted in high and middle schools, which are again subdivided into middle English and middle vernacular. High schools are those institutions which are recognized by the Calcutta University as capable of affording suitable preparation for the Entrance examination. The boys are taught from the earliest stage of their education up to the Entrance course as prescribed by the University of Calcutta, but may leave school without completing the course. Till recently English was taught in all the classes. The younger boys no longer learn that language, but the standard of instruction is higher than that prevailing in lower secondary (middle) schools. English is the medium of instruction in the first four classes of high schools; in the lower classes and in other schools the vernacular is employed. In 1903-4, 10 high schools in the Province were under Government management, 9 were aided—that is to say, institutions under private management towards which Government makes a fixed contribution—and 7 were unaided. The course of instruction at middle English and middle vernacular schools is the same, with the exception that English is taught in the former and not in the latter. The following are the subjects taught in the middle vernacular course: Bengali or Assamese, comprising literature, grammar and composition, history of India, geography, arithmetic, Euclid (Book I), mensuration of plane surfaces and surveying, and elementary natural and sanitary science. In 1903-4 there were 75 middle English and 42 middle vernacular schools for boys. Of the middle schools, 78 were under private management, but received grants from Government or Local and municipal funds; 18 were entirely unaided. Grants are made only to those schools which meet a recognized want, and are likely to be properly maintained; and they do not, as a rule, exceed the amount provided from fees and other sources. Three per cent. of the male population of school-going age were under secondary instruction in 1903-4.

Primary education. Primary education is again divided into upper and lower; but the proportion of boys in upper primary schools is less than 5 per cent. of the total number, and this class of school is slowly dying out. The course of study in lower primary schools includes reading, writing, dictation, simple arithmetic, and the geography of Assam; but in 1903-4, 60 per cent. of the pupils were classed as illiterate, as they were unable to read and write. In upper primary schools the course is somewhat more advanced, including part of the first book of Euclid, mensuration, and a little history. Primary schools are usually

managed by local boards or municipalities, and very few are managed by Government. The standard of instruction given still leaves much to be desired, but efforts have recently been made to improve it, by raising the rates of pay given to the masters. Fixed pay is now awarded at average rates of Rs. 8 a month for certificated and Rs. 5 for uncertificated teachers, supplemented by capitation grants at rates ranging from 3 annas to 6 annas for pupils in the three highest classes. Under the system formerly in force rewards were granted on the results of examinations, and there was thus some risk that the master might concentrate his attention on his brighter pupils and neglect the more backward scholars. These examinations have in consequence been abolished, except in so far as they are required for the grant of scholarships. Seventeen per cent. of the boys of school-going age were under primary instruction in 1903–4. The largest proportion of boys of school-going age attending school is found in the Khāsi and Jaintiā Hills, where in 1903–4 it was 33 per cent. Kāmrūp (29 per cent.) had the highest proportion in the plains, but in Darrang and Lakhimpur it was less than 17 per cent.

Female education.

Altogether, 150 girls' schools were maintained in the Province in 1903–4, the proportion of girls actually under instruction to those of school-going age being 15 per 1,000, as compared with 12 and 5 in 1891 and 1881. The majority of the schools are of the lower primary class, and under the management of the local boards; but in the Khāsi Hills there is a good secondary school maintained by the Welsh Mission, and the success that has attended their efforts can be judged from the fact that 34 per 1,000 of the female population of the District were returned in 1901 as literate, as compared with 4 per 1,000 in the Province as a whole. Elsewhere, the children are withdrawn from school before they have time to make much progress, and the condition of female education cannot be considered satisfactory. The subjects taught include sewing, in addition to those prescribed for the ordinary lower primary course. In the Khāsi and Jaintiā Hills 15 per cent. of the girls of school-going age attended school in 1903–4; but in the plains no District had a larger proportion than Goālpāra, and there it was only 1 per cent.

Special schools.

The only forms of special schools in the Province are those for training teachers, a medical and an engineering school, and law classes. Only two training schools are now maintained, but arrangements have been made to train teachers at selected secondary schools. A medical school was established at

Dibrugarh in 1900 with the help of a legacy left by the late Brigade-Surgeon Berry-White. It is maintained by Government, and teaches up to the civil Hospital Assistant standard, the course occupying four years. There were 101 students on its rolls in 1903-4. An engineering school at Dibrugarh was maintained from the proceeds of a fund left by the late Mr. Williamson, a tea planter of Sibsāgar District. This school taught up to the sub-overseer standard; but its working was not satisfactory, and it was recently closed, the funds thus set free being devoted to the establishment of scholarships tenable at an efficient engineering college elsewhere. Law classes are held at Gauhāti, Sibsāgar, Sylhet, and Silchar.

European education. The only educational institution for European and Eurasian children in the Province is the middle school at Shillong. It was opened in 1881, closed after the earthquake of 1897, which destroyed the building, and reopened three years later. The number of pupils on the rolls in 1903-4 was 29.

Muhammadan education. Muhammadans are not as alive to the advantages of education as Hindus, and in 1901 the proportion of literate persons among them was less than half that prevailing among the Hindus. This is partly due to the fact that the immense majority of the upper and middle classes are Hindus, Islām having obtained most of its converts in Assam from the lower Hindu castes. The proportion of Muhammadans in high schools is barely a third of that of Hindus, and in middle and primary schools it is little over one-half. Special consideration is given to the claims of educated Muhammadans when making appointments to Government service, and efforts have been made to improve the character of instruction in their private schools.

General educational results. The proportion of children under instruction to those of school-going age has risen from 57 per 1,000 in 1880-1 to 90 in 1890-1, and to 121 in 1903-4. According to the Census of 1901, 36 persons per 1,000 were able to read and write. Education has made most progress in the Surmā Valley; and in the Cāchār plains 91 and in Sylhet 81 out of every 1,000 males were classed as literate. In the valley of the Brahmaputra the ratio varied from 68 in Kāmrūp to 49 in Goālpāra. The proportion in the Hill Districts was 50, but this high rate is partly due to the presence of a considerable foreign literate population in the hills. Except among the Khāsis, the number of women who could read and write was inconsiderable. The best-educated sections of the community are the higher Hindu castes, such as the Brāhman, Kāyasth,

Ganak, and Baidya. A considerable proportion of native Christians and Shāhās are also literate; but few of the aboriginal tribes, except the Khāsis, Gāros, and Lushais, have mastered even the elements, though schools have in many cases been opened for their special benefit. The fees charged cannot be considered prohibitive. In the upper classes of high schools boys pay from Rs. 2 to Rs. 3 a month, but education in lower primary schools is free, though presents are sometimes made to the teachers.

Educational finance. The following table classifies according to sources the direct expenditure incurred on various grades of schools in 1903-4:—

	Expenditure on institutions maintained or aided by public funds in 1903-4 from				
	Provincial revenues.	District and municipal funds.	Fees.	Other sources.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
Arts colleges	8,496	...	6,604	3,464	18,564
Training and special schools	28,560	5,714	5,159	9,738	49,171
Secondary boys' schools	37,983	33,273	1,32,108	36,881	2,40,245
Primary boys' schools	16,525	2,14,015	20,222	60,883	3,11,645
Girls' schools	4,604	10,968	1,135	5,797	22,504
Total	96,168	2,63,970	1,65,228	1,16,763	6,42,129

Newspapers and books. In 1903-4 the number of newspapers published in Assam was 9, of which 3 were in English, 2 in Bengali, one in Assamese, and 3 in Khāsī. None of these papers was issued oftener than once a week, and not one had as many as 1,200 subscribers, the average circulation being about 750. Only nine books were published in 1903-4, most of which were small treatises of an educational character or works on religious subjects.

Medical. There is no large medical institution in the Province, but 135 dispensaries are maintained, of which 35 have accommodation for in-patients. The largest hospitals are those at Dibrugarh (98 beds), Dhubri (37 beds), Tezpur (40 beds), and Nowgong (38 beds). One of these institutions has been opened at the head-quarters of each District and subdivision, and of recent years there has been a large increase in the number of rural or village dispensaries. The marked development in the number of dispensaries and in the extent to which they have been used by the people during the last twenty-three years is shown in the following table:—

	1881.	1891.	1901.	1903.
Number of civil hospitals and dispensaries	25	74	125	127
Average daily number of—				
(*a*) In-patients . . .	161	212	361	374
(*b*) Out-patients . . .	448	1,490	3,460	3,829
Income from—				
(*a*) Government . . Rs.	16,105	35,237	75,371	81,788
(*b*) Local and municipal funds . . . Rs.	8,593	52,278	94,964	94,259
(*c*) Fees, endowments, and other sources . . Rs.	15,007	51,562	85,257	81,511
Expenditure on—				
(*a*) Establishment . . Rs.	18,026	45,054	84,475	96,069
(*b*) Medicines, diet, buildings, &c. . . . Rs.	19,516	92,020	1,67,539	1,11,675

Between 1881 and 1901 the population of the Province increased by 19 per cent.; but the number of cases treated in 1903 was nearly sixteen times the number in 1881, and more than eight operations were performed for every one carried out in the earlier year. The mass of the people in the Assam Valley are, however, still indifferent to the advantages to be obtained from European methods. The majority of cases treated at the dispensaries are of a very simple character, and the operations performed are for the most part unimportant.

A leper asylum has recently been opened at Sylhet. The total number of lepers treated in 1903 was 48.

There is a lunatic asylum at Tezpur, to which insane persons are sent from the Hill Districts and the Assam Valley. Lunatics from the Surmā Valley are sent to the Dacca asylum.

The chief statistics of the Tezpur lunatic asylum are shown in the following table:—

	1881.	1891.	1901.	1903.
Average daily number of—				
(*a*) Criminal lunatics . .	18	30	37	54
(*b*) Other lunatics . . .	34	90	82	101
Income from—				
(*a*) Government . . Rs.	7,454	8,729	12,761	14,987
(*b*) Fees and other sources Rs.	600	150	1,672	686
Expenditure on—				
(*a*) Establishment . . Rs.	3,786	3,973	4,499	5,265
(*b*) Diet, buildings, &c. . Rs.	4,268	5,564	8,922	10,479

During the ten years ending 1901 there were 350 admissions. In 232 cases the cause of insanity was unknown; in 45 cases *gānja* was said to have been the predisposing cause, in 16

epilepsy, in 12 fever, in 10 spirit-drinking, in 2 heredity, and in 9 opium.

Vaccination.

Inoculation is still practised in several parts of the Province. The virus is obtained from persons whose small-pox eruptions are about eight days old, and after it has been diluted with water it is applied to small incisions which have been made in the arm of the patient. An attack of small-pox supervenes, and if the patient recovers his chances of contracting the disease in the ordinary way are very slight. Unfortunately, in many cases the person inoculated dies, and under any circumstances he is a dangerous source of infection to his neighbours. Inoculators seldom take service in the vaccination department, though preference is given to them before other candidates.

Vaccination is compulsory only in the larger towns, which in 1901 had a total population of 79,845; but, except among the Mahāpurushias, a somewhat bigoted sect of Vaishnavas, whose head-quarters are at Barpetā in Kāmrūp, its advantages are generally recognized. In 1903 the number of vaccinators employed was 263. Further information is given in the following table:—

	1880-1.	1890-1.	1900-1.	1903-4.
Population among whom vaccination was carried on	*	5,422,745	6,126,343	6,126,343
Number of successful operations	21,170	161,157	257,336	271,295
Ratio per 1,000 of population	*	27	42	44
Total expenditure on vaccination . . . Rs.	*	15,841-0-0	22,833-0-0	24,381-0-0
Cost per successful case Rs.	*	0-1-9	0-1-8	0-1-9

* Information not available.

Sale of quinine.

The system of selling pice packets of quinine at post offices was first brought into full working in 1896. In that year 67,000 packets were sold through the agency of the postal department, and 33,000 by missionaries in the Khāsi and Jaintiā Hills. In 1903-4 the number of packets sold was 105,000; but in 1898, which was a very unhealthy year, more than double this quantity was disposed of.

Rural sanitation.

The sanitation of rural areas is in a condition far from satisfactory. There are no conservancy arrangements, and the water-supply is usually drawn from sluggish rivers and tanks exposed to every form of pollution, or from shallow wells. A considerable number of masonry wells have been constructed at central sites by the local authorities, but unfor-

tunately the Assamese often decline to use them. In 1896 a system of sanitary inspection books was inaugurated in 110 villages, but it is doubtful whether any practical advantages have accrued. In the hills the villages are, as a rule, built on sites which are fairly free from jungle, and, though often very dirty, are exposed to the purifying influences of the sun and air.

Surveys. The following account of the surveys of the Province is taken from the *General Administration Report* for 1902–3:—

'The professional revenue survey of the plains Districts of the Province was undertaken while these Districts formed part of Bengal, and was brought to a conclusion shortly after the formation of the Chief Commissionership. In this survey village boundaries, where they existed, and the boundaries of certain tea grants and revenue-free estates, as well as the geographical and topographical features of the country, were mapped, usually on the scale of 4 inches to a mile; but, except in the Jaintiā Parganas and Cāchār, no field survey was made, and the results were of little practical use for revenue purposes. In the permanently settled portion of Sylhet, the survey was preceded in the years 1859–65 by a demarcation of the boundaries of villages and estates by non-professional agency, in the course of which maps of the estates were prepared by chain and compass on the scale of 16 inches to a mile; and these maps, inaccurate though they are in many respects, afford the most recent record of the boundaries of estates in that area. A cadastral survey, based on a regular professional traverse of the portions of the Assam Valley where most cultivation was to be found, was commenced in 1883 and completed in 1893, and similar cadastral surveys of the *ryotwāri* portions of Sylhet and Cāchār have been effected for resettlement purposes in subsequent years. The field maps of these surveys are on the scale of 16 inches to a mile. While the cadastral survey of a portion of the Assam Valley Districts was in progress, the opportunity was taken to train the local *mandals* in surveying with the plane table; and after the professional party had left the valley, certain additional areas were surveyed cadastrally by local agency on the basis of plane-table traverses in successive years. It was subsequently decided that all such extension surveys should be made on the basis of theodolite traverses; and since 1899 a permanent professional survey detachment has been maintained in the Province, which is charged with the duty of preparing traverses for further cadastral survey which the extension of cultivation may necessitate, as well as with correcting and bringing up to date the topographical details in the standard District maps, and with minor survey operations undertaken in the Province which require professional skill. Wherever an area has been brought under cadastral survey, arrangements have been made for having the

maps and other records kept up to date as far as possible, and the permanent marks looked after by the agency of *mandals* in the Brahmaputra Valley and *patwāris* in the Surmā Valley. The Gāro, Khāsi and Jaintiā, and Nāgā Hills, and a portion of the Lushai Hills have been surveyed by the Topographical Branch of the Imperial Survey Department.'

A full bibliography of writings dealing with Assam will be found in the *Report on the Progress of Historical Research in Assam* (Shillong, 1897). Other authorities which may be consulted are—W. Robinson: *A Descriptive Account of Assam* (Calcutta, 1841); *Principal Heads of the History and Statistics of the Dacca Division* (Calcutta, 1868).—A. J. Moffatt Mills: *Report on the Province of Assam* (Calcutta, 1854).—Sir W. W. Hunter: *A Statistical Account of Assam* (1879).—J. M'Cosh: *Topography of Assam* (Calcutta, 1837).—Colonel Dalton: *The Ethnology of Bengal* (Calcutta, 1872).—A. Mackenzie: *History of the Relations of the Government with the Hill Tribes of the North-East Frontier of Bengal* (Calcutta, 1884).—R. B. Pemberton: *Report on the Eastern Frontier of British India* (Calcutta, 1835).—*Census Reports of Assam*, 1881, 1891, and 1901.—*Introduction to the Land Revenue Manual, Assam* (Calcutta, 1896).—*An Account of the Province of Assam and its Administration* (Shillong, 1903).—Various papers in the *Journal of the Asiatic Society of Bengal*, more particularly vol. xli, Part i, 'Assam in the Sixteenth and Seventeenth Centuries,' by H. Blochmann; and vol. lxii, Part i, No. 4.—E. A. Gait: *The Koch Kings of Kāmarūpa* (Shillong, 1895); *A History of Assam* (Calcutta, 1906). A series of District Gazetteers by B. C. Allen has recently been published (Calcutta, 1906–7). Bibliography.

TABLE I. TEMPERATURE IN ASSAM

Station.	Height of Observatory above sea-level.	Average temperature (in degrees F.) for twenty-five years ending with 1901 in							
		January.		May.		July.		November.	
		Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.
	Feet.								
Silchar	104	65·0	25·3	80·6	16·1	83·7	12·9	74·3	21·3
Sibsāgar	333	59·9	20·1	78·7	14·4	84·0	12·0	69·0	18·3
Dhubri	115	63·4	20·4	77·5	9·0	80·4	4·0	71·8	16·5

NOTE.—The diurnal range is the average difference between the maximum and minimum temperatures of each day. At Dhubri the figures for January are an average of twenty years and the others of twenty-one.

TABLE II. RAINFALL IN ASSAM

Station.	Average rainfall (in inches) for twenty-five years ending with 1901 in												Total of year.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Silchar . . .	0·71	1·87	8·35	14·51	16·57	21·47	18·79	19·92	14·14	5·84	1·58	0·57	124·32
Sibsāgar . . .	1·24	1·83	4·88	9·15	12·02	13·58	16·41	15·91	12·36	5·22	0·99	0·61	94·20
Dhubri . . .	0·43	0·60	1·95	4·65	15·02	24·30	16·47	12·78	13·85	3·29	0·29	0·14	93·77

NOTE.—At Dhubri the figures for October to December are for twenty-four years.

TABLE III. Distribution of Population, Assam, 1901

Natural and administrative divisions.	Area in square miles.	Number of towns.	Number of villages.	Total population.			Urban population.			Persons per square mile in rural areas.
				Persons.	Males.	Females.	Persons.	Males.	Females.	
Surmā Valley.										
Sylhet	5,388*	5	8,330	2,241,848	1,141,060	1,100,788	30,832	19,046	11,786	119
Cāchār	3,769	1	1,332	455,593	244,161	211,432	9,256	6,575	2,681	410
Total Surmā Valley	9,157	6	9,662	2,697,441	1,385,221	1,312,220	40,088	25,621	14,467	291
Brahmaputra Valley.										
Goālpāra	3,961	2	1,461	462,052	242,685	219,367	10,024	6,868	3,156	114
Kāmrūp	3,858	2	1,716	589,187	292,869	296,318	20,408	11,993	8,415	147
Darrang	3,418	1	1,275	337,313	176,030	161,283	5,047	3,568	1,479	97
Nowgong	3,843	1	1,117	261,160	132,995	128,165	4,430	2,659	1,771	67
Sibsāgar	4,996	3	2,109	597,969	316,985	280,984	10,970	6,660	4,310	118
Lakhimpur	4,529*	1	1,123	371,396	199,359	172,037	11,227	7,091	4,136	84
Total Brahmaputra Valley	24,605	10	8,801	2,619,077	1,360,923	1,258,154	62,106	38,839	23,267	104
Hill Districts.										
Lushai Hills	7,227	...	239	82,434	39,004	43,430	...	...	...	11
Nāgā Hills	3,070	1	292	102,402	51,656	50,746	3,093	2,174	919	32
Khāsi and Jaintiā Hills	6,027	1	1,839	202,250	97,221	105,029	8,384	4,980	3,404	32
Gāro Hills	3,140	...	1,026	138,274	70,035	68,239	...	...	...	44
Total Hill Districts	19,464	2	3,396	525,360	257,916	267,444	11,477	7,154	4,323	26
Total British territory	53,226	18	21,859	5,841,878	3,004,060	2,837,818	113,671	71,614	42,057	108
Manipur State	8,456*	1	467	284,465	139,632	144,833	67,093	32,965	34,128	34†
Grand total	61,682	19	22,326	6,126,343	3,143,692	2,982,651	180,764	104,579	76,185	97‡

* Area modified since publication of *Census Report* of 1901. † For total area of State. ‡ The total area and population of Manipur have been taken as rural.

TABLE IV

Statistics of Agriculture in the Assam Valley Division, excluding the permanently settled Estates in Goālpāra

(In square miles)

	Average for seven years ending 1899-90.	Average for ten years ending 1899-1900.	1900-1.	1903-4.
Current fallow	*	916	1,227	1,236
Unsettled waste	*	12,749	14,651	15,066
Rice	1,819	2,012	1,930	2,157
Other food-grains, including pulses	87	104	102	116
Oilseeds	241	257	193	253
Sugar-cane	29	27	28	30
Tea	178	249	320	320
Miscellaneous	308	373	343	312
Total area cropped	2,662	3,022	2,916	3,188
Area double cropped	274	281	210	283
Net area cropped	2,388	2,741	2,706	2,905

* Figures not available.

TABLE V

Prices of Food-grains, &c., Assam

(In seers per rupee)

Selected staples.	Selected centres.	Average for ten years ending 1880.	1890.	1900.	Average for the year 1903.
Common rice	Cāchār	19	17	12	15
	Sylhet	21	20	13	14
	Kāmrūp	16	17	13	13
	Lakhimpur	11	13	11	10
Wheat	Cāchār	10*	10	8	8
	Sylhet	12	12	12†	...
	Kāmrūp	15	14	8	8
	Lakhimpur	9	9	7	8
Gram	Cāchār	13	14*	11	12
	Sylhet	15	16*	11	13
	Kāmrūp	10	13	11	12
	Lakhimpur	9	12*	10	11
Salt	Cāchār	8	10	9	12
	Sylhet	9	11	10	12
	Kāmrūp	8	10	10	11
	Lakhimpur	6	9	8	9

* Average for nine years.
† Figures for one year only; ten years' figures not available.

TABLE VI

RAIL AND RIVER-BORNE TRADE OF ASSAM WITH OTHER PROVINCES

(In thousands of rupees)

Articles.	1890-1.	1900-1.	1903-4.
Imports, Foreign and Indian goods.			
Cotton twist and yarn	9,55	9,08	9,08
,, piece-goods	86,77	86,66	89,56
Gram and pulse	9,72	13,84	14,25
Metals	27,14	39,68	28,83
Oils, kerosene	9,39	11,71	10,38
,, others	12,17	21,41	14,09
Rice (husked)	6,15	38,41	19,87
Salt	20,55	20,65	14,45
Sugar	19,24	22,14	28,10
Tobacco	8,84	13,97	12,61
All other articles	61,58	1,25,50	1,31,68
Total	2,71,10	4,03,05	3,72,90
Exports.			
Rubber	3,63	3,82	1,18
Coal and coke	10,58	9,50	15,49
Cotton, raw	1,52	3,21	3,14
Hides and skins	2,17	5,65	9,32
Jute	8,52	15,10	17,99
Lac	1,13	1,99	4,92
Oilseeds	36,08	25,90	35,51
Oranges	2,30	1,21	13,58
Rice (unhusked)	32,74	31,36	42,18
Stone and lime	6,83	6,51	2,91
Tea	3,39,74	4,46,66	5,51,81
Wood	...	14,99	16,57
All other articles	38,24	68,75	51,00
Total	4,83,48	6,34,65	7,65,60

TABLE VI A

Foreign Land Trade of Assam

(In thousands of rupees)

Articles.	1890-1.	1900-1.	1903-4.
Imports.			
Blankets	8	5	7
Horses and ponies	23	15	85
Rubber	1,00	1,82	1,57
Spices	4	6	12
Wax	6	11	27
All other articles	23	26	1,30
Total	1,64	2,45	4,18
Exports.			
Cotton twist and yarn	2	4	9
" piece-goods	2	9	8
Opium	7	...	...
Rice (husked)	10	7	4
Salt	3	4	3
Silk	19	36	56
All other articles	17	17	34
Total	60	77	1,14

Note.—This table does not include trade with Manipur or Hill Tippera.

TABLE VII

STATISTICS OF CRIMINAL AND CIVIL JUSTICE IN THE PLAINS DISTRICTS OF ASSAM

Criminal Justice

	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1903.	Percentage of convictions in 1903.
Number of persons tried—					
(*a*) For offences against person and property	9,610	10,807	11,273	11,573	37
(*b*) For other offences against the Indian Penal Code . .	2,851	3,821	3,589	3,327	55
(*c*) For offences against Special and Local Laws . . .	4,616	7,762	6,654	7,343	63
Total	17,077	22,390	21,516	22,243	48

Civil Justice

	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1903.
Suits for money or movable property	20,409	19,532	20,684	21,121
Title and other suits . .	2,514	3,577	3,220	4,076
Rent suits	1,972	3,811	4,966	4,836
Total	24,895	26,920	28,870	30,033

TABLE VIII. Sources of Provincial Revenue, Assam

(In thousands of rupees)

	Average for ten years ending March 31, 1890.		Average for ten years ending March 31, 1900.		Year ending March 31, 1901.		Year ending March 31, 1904.	
	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.
Land revenue	41,13	24,06	56,13	43,37	62,15	46,75	63,68	67,51
Stamps	7,35	4,89	8,62	6,47	9,47	7,10	9,87	7,41
Excise	21,16	10,86	27,17	6,79	29,34	7,33	30,24	7,56
Assessed taxes	2,18*	1,09	2,76	1,38	2,98	1,49	2,48	1,24
Forests	2,50†	1,25†	4,18	2,09	5,50	2,75	6,76	3,38
Registration	34	20	48	24	56	28	70	35
Other sources	10,44	5,33	13,42	5,64	28,01	5,34	37,79	5,57
Total	85,10	47,68	1,12,76	65,98	1,38,01	71,04	1,51,52	93,02

* The average is for three years. † The average is for eight years.

TABLE VIII A

Principal Heads of Provincial Expenditure, Assam

(in thousands of rupees)

	Average for ten years ending March 31, 1890.	Average for ten years ending March 31, 1900.	Y ar ending March 31, 1901.	Year ending March 31, 1904.
Opening balance	8,37	11,13	5,40	16,09
Charges in respect of collection (principally land revenue and forests)	8,82	11,71	12,09	13,05
Salaries and expenses of Civil Departments:—				
(a) General administration	1,93	2,68	2,94	3,38
(b) Law and justice	6,15	6,81	7,52	8,77
(c) Police	9,01	13,91	16,35	15,05
(d) Education	1,60	1,92	2,08	2,65
(e) Medical	1,17	2,13	2,68	3,20
(f) Other heads	98	2,63	3,01	2,82
Pensions and miscellaneous civil charges	1,35	2,41	2,59	3,31
Public works	6,40	17,47	18,81	24,85
Other charges and adjustments	7,01	4,81	3,84	4,53
Total expenditure	44,42	66,48	71,91	81,61
Closing balance	9,28	10,44	4,53	27,50

TABLE IX

INCOME AND EXPENDITURE OF LOCAL BOARDS IN ASSAM

	Average for ten years 1899-1900.	1900-1.	1903-4.
Income from—	Rs.	Rs.	Rs.
Provincial rates	6,14,598	6,44,921	6,13,555
Public works	6,889	1,382	2,583
Pounds	61,459	69,201	75,987
Ferries	1,04,474	1,00,102	1,04,139
Contributions	2,22,323	2,43,299	3,39,118
Other sources	67,846	68,649	1,17,613
Total income	10,77,589	11,27,554	12,52,995
Expenditure on—			
Refunds	3,974	3,207	2,659
Post office	41,336	43,065	42,777
General administration	2,784	2,793	2,814
Education	1,86,186	2,15,522	3,28,459
Medical	71,000	97,219	99,578
Public works	6,82,681	7,82,248	6,11,433
Other heads	83,705	79,275	1,25,828
Total expenditure	10,71,666	12,23,329	12,13,548

TABLE X

INCOME AND EXPENDITURE OF MUNICIPALITIES IN ASSAM

	Average for ten years 1899-1900.	1900-1.	1903-4.
Income from—	Rs.	Rs.	Rs.
Taxes on houses and lands	41,915	44,411	56,179
Other taxes	53,366	66,817	66,531
Rents	5,724	7,132	6,155
Grants from Government and Local Boards	40,031	67,953	69,147
Other sources	56,806	59,575	67,941
Total income	1,97,842	2,45,888	2,65,953
Expenditure on—			
Administration and collection of taxes	17,240	18,404	18,860
Public safety	6,954	10,400	11,453
Water-supply and drainage:—			
(*a*) Capital (*b*) Maintenance	31,548	25,555 19,595	19,275 19,293
Conservancy	55,267	76,940	80,713
Hospitals and dispensaries	7,198	8,029	8,965
Public works	46,410	58,293	71,074
Education	6,060	7,806	8,942
Other heads	23,673	24,527	22,290
Total expenditure	1,94,350	2,49,549	2,60,865

TABLE XI

Statistics of the Civil and Military Police Force in Assam

	1881.	1891.	1901.	1903.
Civil Police:—				
Supervising staff:				
District and Assistant Superintendents	10	9	16	16
Inspectors	20	20	20	21
Subordinate staff:				
Sub-inspectors	57	59	116	137
Head constables	180	256	236	226
Constables	1,259	1,779	2,308	2,289
Union and municipal police	111	15	15	15
Rural police	5,304	6,792	6,854	6,807
Military Police:—				
Officers	255	273	354	343
Men	2,086	2,156	2,674	2,527
	Rs.	Rs.	Rs.	Rs.
Expenditure*	8,87,067	12,38,449	19,68,849	18,86,252

* Includes figures for rural police.

TABLE XII

Statistics of the Jails in Assam

	1881.	1891.	1901.	1903.
Number of District jails	4	9	9	7
Number of subsidiary jails (lock-ups)	17	13	15	17
Average daily jail population:—				
(*a*) Male	1,408	1,577	1,600	1,434
(*b*) Female	53	35	33	25
Total prisoners	1,461	1,612	1,633	1,459
Rate of jail mortality per 1,000	43	52	25	28
	Rs.	Rs.	Rs.	Rs.
Expenditure on jail maintenance	1,20,594	1,24,513	2,32,829	1,80,701
Cost per prisoner	82-8-8	99-12-9	142-9-2	123-13-9
Profits on jail manufactures	45,882*	28,548	13,357	9,410
Earnings per prisoner	34-0-0	25-15-0	9-3-0	7-6-0

* Chiefly from extra-mural labour.

TABLE XIII

STATISTICS OF COLLEGES, SCHOOLS, AND SCHOLARS IN ASSAM

Institutions.	1890-1. Number of institutions.	1890-1. Scholars. Males.	1890-1. Scholars. Females.	1900-1. Number of institutions.	1900-1. Scholars. Males.	1900-1. Scholars. Females.	1903-4. Number of institutions.	1903-4. Scholars. Males.	1903-4. Scholars. Females.
Public.									
Arts colleges	...	...	...	1	49	...	2	120	...
Secondary schools—									
Upper	18	3,325	...	23	4,907	...	26	6,116	...
Lower	93	6,991	93	127	8,888	185	122	8,560	382
Primary schools—									
Upper	102	57,607 (Upper and Lower)	4,538 (Upper and Lower)	111	4,290	371	94	3,472	257
Lower	2,120			2,895	76,263	8,126	2,732	74,298	5,483
Training schools	16	290	41	22	350	30	7	373	58
Other special schools	7	202	8	17	849	...	22	1,155	...
Private.									
Advanced	96	1,852	...	89	2,427	4	76	2,384	...
Elementary	189	3,919	18	173	3,008	53	151	3,443	179
Total	2,641	74,186	4,698	3,458	101,031	8,769	3,232	99,921	6,359

MOUNTAINS, LAKES, RIVERS, CANALS, HISTORIC AREAS, ETC.

Himālayas, The.—A system of stupendous mountain ranges, lying along the northern frontiers of the Indian Empire, and containing some of the highest peaks in the world.

Name. Literally, the name is equivalent to 'the abode of snow' (from the Sanskrit *hima*, 'frost,' and *ālaya*, 'dwelling-place'). To the early geographers the mountains were known as Imaus or Himaus and Hemodas; and there is reason to believe that these names were applied to the western and eastern parts respectively, the sources of the Ganges being taken as the dividing line. 'Hemodas' represents the Sanskrit *Himāvata* (Prākrit *Hemota*), meaning 'snowy.' The Greeks who accompanied Alexander styled the mountains the Indian Caucasus.

Extent of range. Modern writers have sometimes included in the system the Muztāgh range, and its extension the Karakoram; but it is now generally agreed that the Indus should be considered the north-western limit. From the great peak of Nanga Parbat in Kashmīr, the Himālayas stretch eastward for twenty degrees of longitude, in a curve which has been compared to the blade of a scimitar, the edge facing the plains of India. Barely one-third of this vast range of mountains is known with any degree of accuracy. The Indian Survey department is primarily engaged in supplying administrative needs; and although every effort is made, while fulfilling this duty, to collect information of purely scientific interest, much still remains to be done.

Political distribution. A brief abstract of our knowledge of the Himālayas may be given by shortly describing the political divisions of India which include them. On the extreme north-west, more than half of the State of Kashmīr and Jammu lies in the Himālayas; and this portion has been described in some detail by Drew in *Jammu and Kashmīr Territories*, and by Sir W. Lawrence in *The Valley of Kashmīr*. The next section, appertaining to the Punjab and forming the British District of Kāngra and the group of feudatories known as the Simla Hill States, is better known. East of this lies the Kumaun Division of the United Provinces, attached to which is the Tehrī State. This portion has been surveyed in detail, owing to the requirements of the revenue administration, and is also familiar from the careful

accounts of travellers. For 500 miles the State of Nepāl occupies the mountains, and is to the present day almost a *terra incognita*, owing to the acquiescence by the British Government in the policy of exclusion adopted by its rulers. Our knowledge of the topography of this portion of the Himālayas is limited to the information obtained during the operations of 1816, materials collected by British officials resident at Kātmāndu, notably B. H. Hodgson, and the accounts of native explorers. The eastern border of Nepāl is formed by the State of Sikkim and the Bengal District of Darjeeling, which have been graphically described by Sir Joseph Hooker and more recently by Mr. Douglas Freshfield. A small wedge of Tibetan territory, known as the Chumbi Valley, separates Sikkim from Bhutān, which latter has seldom been visited by Europeans. East of Bhutān the Himālayas are inhabited by savage tribes, with whom no intercourse is possible except in the shape of punitive expeditions following raids on the plains. Thus a stretch of nearly 400 miles in the eastern portion of the range is imperfectly known.

Divisions of range.

In the western part of the Himālayas, which, as has been shown, has been more completely examined than elsewhere, the system may be divided into three portions. The central or main axis is the highest, which, starting at Nanga Parbat on the north-west, follows the general direction of the range. Though it contains numerous lofty peaks, including Nandā Devī, the highest mountain in British India, it is not a true watershed. North of it lies another range, here forming the boundary between India and Tibet, which shuts off the valley of the Indus, and thus may be described as a real water-parting. From the central axis, and usually from the peaks in it, spurs diverge, with a general south-easterly or south-westerly direction, but actually winding to a considerable extent. These spurs, which may be called the Outer Himālayas, cease with some abruptness at their southern extremities, so that the general elevation is 8,000 or 9,000 feet a few miles from the plains. Separated from the Outer Himālayas by elevated valleys or *dūns* is a lower range known as the Siwāliks, which is well marked between the Beās and the Ganges, reappears to the south of central Kumaun, and is believed to exist in Nepāl. Although the general character of the Himālayas in Nepāl is less accurately known, there is reason to suppose that it approximates to that of the western ranges.

Scenery.

Within the limits of this great mountain chain all varieties of scenery can be obtained, except the placid charm of level

country. Luxuriant vegetation clothes the outer slopes, gradually giving place to more sombre forests. As higher elevations are reached, the very desolation of the landscape affects the imagination even more than the beautiful scenery left behind. It is not surprising that these massive peaks are venerated by the Hindus, and are intimately connected with their religion, as giving rise to some of the most sacred rivers, as well as on account of legendary associations. A recent writer has vividly described the impressions of a traveller through the foreground of a journey to the snows in Sikkim[1]:—

'He sees at one glance the shadowy valleys from which shining mist-columns rise at noon against a luminous sky, the forest ridges, stretching fold behind fold in softly undulating lines—dotted by the white specks which mark the situation of Buddhist monasteries—to the glacier-draped pinnacles and precipices of the snowy range. He passes from the zone of tree-ferns, bamboos, orange-groves, and *dal* forest, through an endless colonnade of tall-stemmed magnolias, oaks, and chestnut trees, fringed with delicate orchids and festooned by long convolvuluses, to the region of gigantic pines, junipers, firs, and larches. Down each ravine sparkles a brimming torrent, making the ferns and flowers nod as it dashes past them. Superb butterflies, black and blue, or flashes of rainbow colours that turn at pleasure into exact imitations of dead leaves, the fairies of this lavish transformation scene of Nature, sail in and out between the sunlight and the gloom. The mountaineer pushes on by a track half buried between the red twisted stems of tree-rhododendrons, hung with long waving lichens, till he emerges at last on open sky and the upper pastures—the Alps of the Himālaya—fields of flowers: of gentians and edelweiss and poppies, which blossom beneath the shining storehouses of snow that encompass the ice-mailed and fluted shoulders of the giants of the range. If there are mountains in the world which combine as many beauties as the Sikkim Himālayas, no traveller has as yet discovered and described them for us.'

Snow-line. The line of perpetual snow varies from 15,000 to 16,000 feet on the southern exposures. In winter, snow generally falls at elevations above 5,000 feet in the west, while falls at 2,500 feet were twice recorded in Kumaun during the last century. Glaciers extend below the region of perpetual snow, descending to 12,000 or 13,000 feet in Kulū and Lāhul, and even lower in Kumaun, while in Sikkim they are about 2,000 feet higher. On the vast store-house thus formed largely depends the prosperity of Northern India, for the great rivers which derive their

[1] D. W. Freshfield in *The Geographical Journal*, vol. xix, p. 453.

water from the Himālayas have a perpetual supply which may diminish in years of drought, but cannot absolutely fail to feed the system of canals drawn from them.

Rivers. While all five rivers from which the Punjab derives its name rise in the Himālayas, the Sutlej alone has its source beyond the northern range, near the head-waters of the Indus and Tsan-po. In the next section are found the sources of the Jumna, Ganges, and Kālī or Sārdā high up in the central snowy range, while the Kauriāla or Karnāli, known lower down in its course as the Gogra, rises in Tibet, beyond the northern watershed. The chief rivers of Nepāl, the Gandak and Kosi, each with seven main affluents, have their birth in the Himālayas, which here supply a number of smaller streams merging in the larger rivers soon after they reach the plains. Little is known of the upper courses of the northern tributaries of the Brahmaputra in Assam; but it seems probable that the Dihāng, which has been taken as the eastern boundary of the Himālayas, is the channel connecting the Tsan-po and the Brahmaputra.

Highest peaks. Passing from east to west the principal peaks are Nanga Parbat (26,182 feet) in Kashmīr; a peak in Spiti (Kāngra District) exceeding 23,000, besides three over 20,000; Nandā Devī (25,661), Trisūl (23,382), Pānch Chūlhī (22,673), and Nandā Kot (22,538) in the United Provinces; Mount Everest (29,002), Devālagiri (26,826), Gosainthān (26,305), and Kinchinjunga (28,146), with several smaller peaks, in Nepāl; and Dongkya (23,190), with a few rising above 20,000, in Sikkim.

Valleys and lakes. The most considerable stretch of level ground is the beautiful Kashmīr Valley, through which flows the Jhelum. In length about 84 miles, it has a breadth varying from 20 to 25 miles. Elsewhere steep ridges and comparatively narrow gorges are the rule, the chief exception being the Valley of Nepāl, which is an undulating plain about 20 miles from north to south, and 12 to 14 miles in width. Near the city of Srīnagar is the Dal Lake, described as one of the most picturesque in the world. Though measuring only 4 miles by 2½, its situation among the mountains, and the natural beauty of its banks, combined with the endeavours of the Mughal emperors to embellish it, unite to form a scene of great attractions. Some miles away is the larger expanse of water known as the Wular Lake, which ordinarily covers 12½ square miles, but in years of flood expands to over 100. A number of smaller lakes, some of considerable beauty, are situated in the outer ranges in Naini Tāl District. In 1903 the Gohnā Lake,

in Garhwāl District, was formed by the subsidence of a steep hill, rising 4,000 feet above the level of a stream which it blocked.

Geology[1]. The geological features of the Himālayas can be conveniently grouped into three classes, roughly corresponding to the three main orographical zones: (1) the Tibetan highland zone, (2) the zone of snowy peaks and Outer Himālayas, and (3) the Sub-Himālayas.

In the Tibetan highlands there is a fine display of marine fossiliferous rocks, ranging in age from lower palaeozoic to Tertiary. In the zone of the snowy peaks granites and crystalline schists are displayed, fringed by a mantle of unfossiliferous rocks of old, but generally unknown, age, forming the lower hills or Outer Himālayas, while in the Sub-Himālayas the rocks are practically all of Tertiary age, and are derived from the waste of the highlands to the north.

Age and origin of the range. The disposition of these rocks indicates the existence of a range of some sort since lower palaeozoic times, and shows that the present southern boundary of the marine strata on the northern side of the crystalline axis is not far from the original shore of the ocean in which these strata were laid down. The older unfossiliferous rocks of the Lower Himālayas on the southern side of the main crystalline axis are more nearly in agreement with the rocks which have been preserved without disturbance in the Indian Peninsula; and even remains of the great Gondwāna river-formations which include our valuable deposits of coal are found in the Darjeeling area, involved in the folding movements which in later geological times raised the Himālayas to be the greatest among the mountain ranges of the world. The Himālayas were thus marked out in very early times, but the main folding took place in the Tertiary era. The great outflow of the Deccan trap was followed by a depression of the area to the north and west, the sea in eocene times spreading itself over Rājputāna and the Indus valley, covering the Punjab to the foot of the Outer Himālayas as far east as the Ganges, at the same time invading on the east the area now occupied by Assam. Then followed a rise of the land and consequent retreat of the sea, the fresh-water deposits which covered the eocene marine strata being involved in the movement as fast as they were formed, until the Sub-Himālayan zone river-deposits, no older than the pliocene, became tilted up and even overturned in the great foldings of the strata. This final rise of the Himālayan range in late

[1] By Sir T. H. Holland, Geological Survey of India.

Tertiary times was accompanied by the movements which gave rise to the Arakan Yoma and the Nāgā hills on the east, and the hills of Baluchistān and Afghānistān on the west.

The rise of the Himālayan range may be regarded as a great buckle in the earth's crust, which raised the great Central Asian plateau in late Tertiary times, folding over in the Baikal region on the north against the solid mass of Siberia, and curling over as a great wave on the south against the firmly resisting mass of the Indian Peninsula.

As an index to the magnitude of this movement within the Tertiary era, we find the marine fossil foraminifer, *Nummulites*, which lived in eocene times in the ocean, now at elevations of 20,000 feet above sea-level in Zāskār. With the rise of the Himālayan belt, there occurred a depression at its southern foot, into which the alluvial material brought down from the hills has been dropped by the rivers. In miocene times, when presumably the Himālayas did not possess their present elevation, the rivers deposited fine sands and clays in this area; and as the elevatory process went on, these deposits became tilted up, while the rivers, attaining greater velocity with their increased gradient, brought down coarser material and formed conglomerates in pliocene times. These also became elevated and cut into by their own rivers, which are still working along their old courses, bringing down boulders to be deposited at the foot of the hills and carrying out the finer material farther over the Indo-Gangetic plain.

The Siwālik series.

The series of rocks which have thus been formed by the rivers, and afterwards raised to form the Sub-Himālayas, are known as the Siwālik series. They are divisible into three stages. In the lowest and oldest, distinguished as the Nāhan stage, the rocks are fine sandstones and red clays without any pebbles. In the middle stage, strings of pebbles are found with the sandstones, and these become more abundant towards the top, until we reach the conglomerates of the upper stage. Along the whole length of the Himālayas these Siwālik rocks are cut off from the older rock systems of the higher hills by a great reversed fault, which started in early Siwālik times and developed as the folding movements raised the mountains and involved in its rise the deposits formed along the foot of the range. The Siwālik strata never extended north of this great boundary fault, but the continued rise of the mountains affected these deposits, and raised them up to form the outermost zone of hills.

The upper stage of the Siwālik series is famous on account

of the rich collection of fossil vertebrates which it contains. Among these there are forms related to the miocene mammals of Europe, some of which, like the hippopotamus, are now unknown in India but have relatives in Africa. Many of the mammals now characteristic of India were represented by individuals of much greater size and variety of species in Siwālik times.

Unfossiliferous rock of Outer Himālayas.

The unfossiliferous rocks which form the Outer Himālayas are of unknown age, and may possibly belong in part to the unfossiliferous rocks of the Peninsula, like the Vindhyans and the Cuddapahs. Conspicuous among these rocks are the dolomitic limestones of Jaunsār and Kumaun, the probable equivalents of the similar rocks far away to the east at Buxa in the Duārs. With these a series of purple quartzites and basic lava-flow is often associated. In the Simla area the unfossiliferous rocks have been traced out with considerable detail; and it has been shown that quartzites, like those of Jaunsār and Kumaun, are overlaid by a system of rocks which has been referred to the carbonaceous system on account of the black carbonaceous slates which it includes. The only example known of pre-Tertiary fossiliferous rocks south of the snowy range in the Himālayas occurs in south-west Garhwāl, where there are a few fragmentary remains of mesozoic fossils of marine origin.

The crystalline axis.

The granite rocks, which form the core of the snowy range and in places occur also in the Lower Himālayas, are igneous rocks which may have been intruded at different periods in the history of the range. They are fringed with crystalline schists, in which a progressive metamorphism is shown from the edge of granitic rock outwards, and in the inner zone the granitic material and the pre-existing sedimentary rock have become so intimately mixed that a typical banded gneiss is produced. The resemblance of these gneisses to the well-known gneisses of Archaean age in the Peninsula and in other parts of the world led earlier observers to suppose that the gneissose rocks of the Central Himālayas formed an Archaean core, against which the sediments were subsequently laid down. But as we now know for certain that both granites, such as we have in the Himālayas, and banded gneisses may be much younger, even Tertiary in age, the mere composition and structure give no clue to the age of the crystalline axis. The position of the granitic rock is probably dependent on the development of low-pressure areas during the process of folding, and there is thus a prima facie reason for supposing that much of the igneous material became injected during the Tertiary period. With

the younger intrusions, however, there are probably remains of injections which occurred during the more ancient movements, and there may even be traces of the very ancient Archaean gneisses; for we know that pebbles of gneisses occur in the Cambrian conglomerates of the Tibetan zone, and these imply the existence of gneissose rocks exposed to the atmosphere in neighbouring highlands. The gneissose granites of the Central Himālayas must have consolidated under great pressure, with a thick superincumbent envelope of sedimentary strata; and their exposure to the atmosphere thus implies a long period of effectual erosion by weathering agents, which have cut down the softer sediments more easily and left the more resisting masses of crystalline rocks to form the highest peaks in the range. Excellent illustrations of the relationship of the gneissose granites to the rocks into which they have been intruded are displayed in the Dhaola Dhār in Kulū, in the Chor Peak in Garhwāl, and in the Darjeeling region east of Nepāl.

Fossiliferous rocks of the Tibetan zone.

Beyond the snowy range in the Tibetan zone we have a remarkable display of fossiliferous rocks, which alone would have been enough to make the Himālayas famous in the geological world. The boundary between Tibetan territory and Spiti and Kumaun has been the area most exhaustively studied by the Geological Survey. The rocks exposed in this zone include deposits which range in age from Cambrian to Tertiary. The oldest fossiliferous system, distinguished as the Haimanta ('snow-covered') system, includes some 3,000 feet of the usual sedimentary types, with fragmentary fossils which indicate Cambrian and Silurian affinities. Above this system there are representatives of the Devonian and Carboniferous of Europe, followed by a conglomerate which marks a great stratigraphical break at the beginning of Permian times in Northern India. Above the conglomerate comes one of the most remarkably complete successions of sediments known, ranging from Permian, without a sign of disturbance in the process of sedimentation, throughout the whole Mesozoic epoch to the beginning of Tertiary times. The highly fossiliferous character of some of the formations in this great pile of strata, like the *Productus* shales and the Spiti shales, has made this area classic ground to the palaeontologist.

The Eurasian ocean distinguished by the name 'Thetys,' which spread over this area throughout the Palaeozoic and Mesozoic times, became driven back by the physical revolution which began early in Tertiary times, when the folding movements gave rise to the modern Himālayas. As relics

of this ocean have been discovered in Burma and China it will not be surprising to find, when the ground has been more thoroughly explored, that highly fossiliferous rocks are preserved also in the Tibetan zone beyond the snowy ranges of Nepāl and Sikkim.

Economic minerals.

Of the minerals of value, graphite has been recorded in the Kumaun Division; coal occurs frequently amongst the Nummulitic (eocene) rocks of the foot-hills and the Gondwāna strata of Darjeeling District; bitumen has been found in small quantities in Kumaun; stibnite, a sulphide of antimony, occurs associated with ores of zinc and lead in well-defined lodes in Lāhul; gold is obtained in most of the rivers, and affords a small and precarious living for a few washers; copper occurs very widely disseminated and sometimes forms distinct lodes of value in the slaty series south of the snowy range, as in the Kulū, Kumaun, and Darjeeling areas; ferruginous schists sometimes rich in iron occur under similar geological conditions, as in Kāngra and Kumaun; sapphires of considerable value have been obtained in Zāskār and turquoise from the central highlands; salt is being mined in quantity from near the boundary of the Tertiary and older rocks in the State of Mandi; borax and salt are obtained from lakes beyond the Tibetan border; slate-quarrying is a flourishing industry along the southern slopes of the Dhaola Dhār in Kāngra District; mica of poor quality is extracted from the pegmatites of Kulū; and a few other minerals of little value, besides building stones, are obtained in various places. A small trade is developed, too, by selling the fossils from the Spiti shales as sacred objects.

Botany.

The general features of the great variety in vegetation have been illustrated in the quotation from Mr. Freshfield's description of Sikkim. These variations are naturally due to an increase in elevation, and to the decrease in rainfall and humidity passing from south to north, and from east to west. The tropical zone of dense forest extends up to about 6,500 feet in the east, and 5,000 feet in the west. In the Eastern Himālayas orchids are numerically the predominant order of flowering plants; while in Kumaun about 62 species, both epiphytic and terrestrial, have been found. A temperate zone succeeds, ranging to about 12,000 feet, in which oaks, pines, and tree-rhododendrons are conspicuous, with chestnut, maple, magnolia, and laurel in the east. Where rain and mist are not excessive, as for example in Kulū and Kumaun, European fruit trees (apples, pears, apricots, and peaches) have been

naturalized very successfully, and an important crop of potatoes is obtained in the west. Above about 12,000 feet the forests become thinner. Birch and willow mixed with dwarf rhododendrons continue for a time, till the open pasture land is reached, which is richly adorned in the summer months with brilliant Alpine species of flowers. Contrasting the western with the eastern section we find that the former is far less rich, though it has been better explored, while there is a preponderance of European species. A fuller account of the botany of the Himālayas will be found in Vol. I of the *Imperial Gazetteer*, chap. iv.

To obtain a general idea of the fauna of the Himālayas it is sufficient to consider the whole system as divided into two tracts: namely, the area in the lower hills where forests can flourish, and the area above the forests. The main characteristics of these tracts have been summarized by the late Dr. W. T. Blanford[1]. In the forest area the fauna differs markedly from that of the Indian Peninsula stretching away from the base of the hills. It does not contain the so-called Aryan element of mammals, birds, and reptiles which are related to Ethiopian and Holarctic genera, and to the pliocene Siwālik fauna, nor does it include the Dravidian element of reptiles and batrachians. On the other hand, it includes the following animals which do not occur in the Peninsula—Mammals: the families Simiidae, Procyonidae, Talpidae, and Spalacidae, and the sub-family Gymnurinae, besides numerous genera, such as *Prionodon*, *Helictis*, *Arctonyx*, *Atherura*, *Nemorhaedus*, and *Cemas*. Birds: the families Eurylaemidae, Indicatoridae, and Heliornithidae, and the sub-family Paradoxornithinae. Reptiles: Platysternidae and Anguidae. Batrachians: Dyscophidae, Hylidae, Pelobatidae, and Salamandridae.' Compared with the Peninsula, the fauna of the forest area is poor in reptiles and batrachians.

Fauna.

'It also contains but few peculiar genera of mammals and birds, and almost all the peculiar types that do occur have Holarctic affinities. The Oriental element in the fauna is very richly represented in the Eastern Himālayas and gradually diminishes to the westward, until in Kashmīr and farther west it ceases to be the principal constituent. These facts are consistent with the theory that the Oriental constituent of the Himālayan fauna, or the greater portion of it, has migrated into the mountains from the eastward at a comparatively recent period. It is an important fact that this migration appears to have been from Assam and not from the Peninsula of India.'

[1] 'The Distribution of Vertebrate Animals in India, Ceylon, and Burma,' *Proceedings, Royal Society*, vol. lxvi, p. 484.

Dr. Blanford suggested that the explanation was to be found in the conditions of the glacial epoch. When the spread of snow and ice took place, the tropical fauna, which may at that time have resembled more closely that of the Peninsula, was forced to retreat to the base of the mountains or perished. At such a time the refuge afforded by the Assam Valley and the hill ranges south of it, with their damp, sheltered, forest-clad valleys, would be more secure than the open plains of Northern India and the drier hills of the country south of these. As the cold epoch passed away, the Oriental fauna re-entered the Himālayas from the east.

Above the forests the Himālayas belong to the Tibetan sub-region of the Holarctic region, and the fauna differs from that of the Indo-Malay region, 44 per cent. of the genera recorded from the Tibetan tract not being found in the Indo-Malay region. During the glacial epoch the Holarctic forms apparently survived in great numbers.

People. Owing to the rugged nature of the country, which makes travelling difficult and does not invite immigrants, the inhabitants of the Himālayas present a variety of ethnical types which can hardly be summarized briefly. Two common features extending over a large area may be referred to. From Ladākh in Kashmīr to Bhutān are found races of Indo-Chinese type, speaking dialects akin to Tibetan and professing Buddhism. In the west these features are confined to the higher ranges; but in Sikkim, Darjeeling, and Bhutān they are found much nearer the plains of India. Excluding Burma, this tract of the Himālayas is the only portion of India in which Buddhism is a living religion. As in Tibet, it is largely tinged by the older animistic beliefs of the people. Although the Muhammadans made various determined efforts to conquer the hills, they were generally unsuccessful, yielding rather to the difficulties of transport and climate than to the forces brought against them by the scanty though brave population of mountaineers. In the twelfth century a Tartar horde invaded Kashmīr, but succumbed to the rigours of the snowy passes. Subsequently a Tibetan soldier of fortune seized the supreme power and embraced Islām. Late in the fourteenth century the Muhammadan ruler of the country, Sultān Sikandar, pressed his religion by force on the people, and in the province of Kashmīr proper 94 per cent. of the total are now Muhammadans. Baltistān is also inhabited chiefly by Muhammadans, but the proportion is much less in Jammu, and beyond the Kashmīr State Islām has few followers. Hinduism becomes an impor-

tant religion in Jammu, and is predominant in the southern portions of the Himālayas within the Punjab and the United Provinces. It is the religion of the ruling dynasty in Nepāl, where, however, Buddhism is of almost equal strength. East of Nepāl Hindus are few. Where Hinduism prevails, the language in common use, known as Pahārī, presents a strong likeness to the languages of Rājputāna; thus confirming the traditions of the higher classes that their ancestors migrated from the plains of India. In Nepāl the languages spoken are more varied, and Newārī, the ancient state language, is akin to Tibetan. The Mongolian element in the population is strongly marked in the east, but towards the west has been pushed back into the higher portion of the ranges. In Kumaun are found a few shy people living in the recesses of the jungles, and having little intercourse with their more civilized neighbours. Tribes which appear to be akin to these are found in Nepāl, but little is known about them. North of Assam the people are of Tibeto-Burman origin, and are styled, passing from west to east, the Akās, Daflās, Mīris, and Abors, the last name signifying 'unknown savages.' Colonel Dalton has described these people in his *Ethnology of Bengal*.

Agriculture.

From the commercial point of view the agricultural products of the Himālayas, with few exceptions, are of little importance. The chief food-grains cultivated are, in the outer ranges, rice, wheat, barley, *maruā*, and amaranth. In the hot, moist valleys, chillies, turmeric, and ginger are grown. At higher levels potatoes have become an important crop in Kumaun; and, as already mentioned, in Kulū and Kumaun European fruits have been successfully naturalized, including apples, pears, cherries, and strawberries. Two crops are obtained in the lower hills; but cultivation is attended by enormous difficulties, owing to the necessity of terracing and clearing land of stones, while irrigation is practicable only by long channels winding along the hill-sides from the nearest suitable stream or spring. As the snowy ranges are approached barley and buckwheat, grown during the summer months, are the principal crops, and only one harvest in the year can be obtained. Tea gardens were successfully established in Kumaun during the first half of the nineteenth century, but the most important gardens are now situated in Kāngra and Darjeeling. In the latter District cinchona is grown for the manufacture of quinine and cinchona febrifuge.

Forests.

The most valuable forests are found in the Outer Himālayas, yielding a number of timber trees, among which may be men-

tioned *sāl*, *shīsham* (*Dalbergia Sissoo*), and *tūn* (*Cedrela Toona*). Higher up are found the *deodār* and various kinds of pine, which are also extracted wherever means of transport can be devised. In the Eastern Himālayas wild rubber is collected by the hill tribes already mentioned, and brought for sale to the Districts of the Assam Valley.

Means of communication. Communications within the hills are naturally difficult. Railways have hitherto been constructed only to three places in the outer hills: Jammu in the Kashmīr State, Simla in the Punjab, and Darjeeling in Bengal. Owing to the steepness of the hill-sides and the instability of the strata composing them, these lines have been costly to build and maintain. A more ambitious project is now being carried out to connect the Kashmīr Valley with the plains, motive power being supplied by electricity to be generated by the Jhelum river. The principal road practicable for wheeled traffic is also in Kashmīr, leading from Rāwalpindi in the plains through Murree and Bāramūla to Srīnagar. Other cart-roads have been made connecting with the plains the hill stations of Dharmsāla, Simla, Chakrāta, Mussoorie, Dalhousie, Nainī Tāl, and Rānīkhet. In the interior the roads are merely bridle-paths. The great rivers flowing in deep gorges are crossed by suspension bridges made of the rudest materials. The sides consist of canes and twisted fibres, and the footway may be a single bamboo laid on horizontal canes supported by ropes attached to the sides. These frail constructions, oscillating from side to side under the tread of the traveller, are crossed with perfect confidence by the natives, even when bearing heavy loads. On the more frequented paths, such as the pilgrim road from Hardwār up the valley of the Ganges to the holy shrines of Badrināth and Kedārnāth, more substantial bridges have been constructed by Government, and the roads are regularly repaired. Sheep and, in the higher tracts, yaks and crosses between the yak and ordinary cattle are used as beasts of burden. The trade with Tibet is carried over lofty passes, the difficulties of which have not yet been ameliorated by engineers. Among these the following may be mentioned: the Kangwa La (15,500 feet) on the Hindustān-Tibet road through Simla; the Mānā (18,000), Nitī (16,570), and Balcha Dhurā in Garhwāl; the Anta Dhurā (17,270), Lampiya Dhurā (18,000), and Lipū Lekh (16,750) in Almorā; and the Jelep La (14,390) in Sikkim.

Bibliography. [More detailed information about the various portions of the Himālayas will be found in the articles on the political

divisions referred to above. An admirable summary of the orography of the Himālayas is contained in Lieut.-Col. H. H. Godwin-Austen's presidential address to the Geographical Section of the British Association in 1883 (*Proceedings, Royal Geographical Society*, 1883, p. 610; and 1884, pp. 83 and 112, with a map). Fuller accounts of the botany, geology, and fauna are given in E. F. Atkinson's *Gazetteer of the Himālayan Districts in the North-Western* [United] *Provinces*, 3 vols. (1882–6). See also General Strachey's 'Narrative of a Journey to Mānasarowar,' *Geographical Journal*, vol. xv, p. 150. More recent works are the *Kāngra District Gazetteer* (Lahore, 1899); C. A. Sherring, *Western Tibet and the British Borderland* (1906); and D. W. Freshfield, *Round Kangchenjunga* (1903), which contains a full bibliography for the Eastern Himālayas. An account of the Himālayas by officers of the Survey of India and the Geological department is under preparation.]

Sinchulā.—Hill range in Jalpaigurī District, Eastern Bengal and Assam, lying between 26° 41′ and 26° 49′ N. and 89° 29′ and 89° 45′ E., and forming the boundary between British territory and Bhutān. The average elevation of the range is from 4,000 to a little over 6,000 feet, the highest peak, Renigango, in 26° 47′ N. and 89° 34′ E., being 6,222 feet above sea-level. The hills run generally in long even ridges, thickly wooded from base to summit, but occasionally the summits bristle with bare crags from 200 to 300 feet in height. From CHOTĀ SINCHULĀ (5,695 feet high) a magnificent view is obtained over the whole of the Buxa Duārs. In the distance are seen large green patches of cultivation in the midst of wide tracts of brown grass and reed jungle, the cultivated spots being dotted with homesteads; in the foreground, near the hills, are dense *sāl* (*Shorea robusta*) and other forests, the whole being intersected by numerous rivers and streams. The Sinchulā range can nearly everywhere be ascended by men and by beasts of burden, but not by wheeled vehicles.

Akā Hills.—A section of the sub-Himālayan hills, lying north of Darrang District, Eastern Bengal and Assam, between the Dhansiri and Dikrai rivers. The hills have steep ridges covered with dense forest, but, owing to the inhospitable nature of the country and of its inhabitants, they have never been explored. The Akā tribe is divided into two sections, nicknamed the Hazāri-khoās, or 'tribe supported by a thousand groups of ryots,' and the Kapās-chors, or 'thieves who lurk in the cotton fields'; and in the time of the Assam Rājās

they regularly harried the inhabitants of the plains. For many years the chief of the Kapās-chor tribe, Tagi Rājā, violated the frontier, and in 1829 he was captured and lodged in the Gauhāti jail. In 1832 he was released, but immediately resumed his attacks, and in 1835 massacred all the inhabitants of the police outpost and British village of Bālipāra. Six years later he surrendered, and an agreement was made by which both sections of the tribe received a yearly allowance in consideration of good conduct. In 1883 Medhi, the Kapās-chor chief, detained a *mauzadār* who had visited his villages, while his brother carried off from Bālipāra a clerk and ranger in the employ of the Forest department. A punitive expedition was dispatched which occupied Akā territory and recovered the captives, with the exception of the *mauzadār*, who had died. Since that date they have given little trouble; but in 1900 a party of armed Akās forcibly entered the shop of a trader at Bālipāra, in order to exact the amount which they alleged was due to them for rubber tapped in the hills. A fine was imposed on the tribe; but in order to minimize the chances of friction, it was decided to discontinue the practice under which coolies had been sent into the hills to tap rubber, and to leave the hillmen to bring down this product themselves. The Akās are apparently of Tibeto-Burman origin, and, though a small tribe, are warlike and independent. Their strength lies in their position, which enables them to attack British subjects without difficulty, while punitive expeditions sent into their hills are costly out of all proportion to the damage inflicted on the enemy. An account of the Akās will be found in Colonel Dalton's *Ethnology of Bengal.*

Daflā Hills.—A section of the Himālayan range lying north of Darrang and Lakhimpur Districts, Eastern Bengal and Assam, between the Rangānadī on the east and the Bhareli on the west and occupied by the Daflā tribes. These tribes are of Tibeto-Burman origin, and are of short, sturdy physique, with a Mongolian type of countenance. They are much less united than the Akās, their neighbours on the west, and are thus less formidable to Government. In the time of the Ahom Rājās the Daflās were accustomed to levy blackmail upon the people of the plains; and this custom was the cause of much trouble till 1852, when they were finally induced to commute their claims for a money payment. In 1872 they raided a village of Daflās in Darrang District, whom they considered to be responsible for the introduction of an epidemic into the hills, killed two persons and carried off forty-four

captives. A blockade was instituted, but proved ineffectual; and a military force was sent into the hills in 1874–5, which attained the desired object of liberating the prisoners who survived. Since that date the tribe has given little trouble, and though individuals have occasionally been carried off from the plains, their release has been effected without difficulty.

Mīri Hills.—A section of the Himālayan range lying north of Lakhimpur District, Eastern Bengal and Assam, between the hills occupied by the Gallongs and the Rangānadī, and inhabited by the Mīri tribe. The Mīris are of Tibeto-Burman origin, and have tall, well-developed frames, with pleasant countenances of the Mongolian type. Unlike their neighbours, they have never given trouble to the British Government, and large numbers of the tribe have now settled on the Assam plains. A full account of the Mīris will be found in Colonel Dalton's *Ethnology of Bengal*.

Abor Hills.—A section of the Himālayan range lying on the northern frontier of Assam, between the Siom river on the west and the Dibāng on the east, occupied by tribes of Tibeto-Burman origin loosely termed 'Abors' or 'unknown savages.' Owing to the difficulty of the country and the inhospitable character of the inhabitants, these hills have never been properly explored. The ranges, which are of considerable height, are covered with dense forest, and intersected with large rivers which make their way through wild and precipitous gorges into the plains. The Abor tribes fall into two chief sections: the Passi-Meyongs, who occupy the hills bounded on the west by the Mīri country and on the east by the Dihāng; and the Bor Abors, who live between that river and the Dibāng. The Abors are short and sturdy savages, with countenances of a marked Mongolian type. They possess a high opinion of their own strength and importance, and the want of population on the north bank of the Brahmaputra between Dibrugarh and Sadiyā is largely due to the dread of their raids. On several occasions Government has found it necessary to send punitive expeditions into their hills, to avenge the murder of British subjects. Such expeditions were dispatched in 1858 and 1859; and in 1861, when a fresh massacre took place a few miles from Dibrugarh, preparations were made to establish a chain of outposts along the north bank of the Brahmaputra. The Abors appear to have been impressed by these operations, and entered into agreements under which they were to receive an annual allowance of iron hoes, salt, opium, and other articles, so long as they continued to be of good behaviour. For some

years the tribes remained quiet; but in 1889 four Mīris, who were British subjects, were decoyed by Passi-Meyongs across the frontier and killed. The guilty villages were punished by a fine, but in 1893 the hillmen again broke out and cut up a patrol of three military police sepoys. A few weeks later a second attack was made on a police patrol, one of whom was killed and one wounded. An expedition was then sent into Abor territory, which occupied the principal villages after meeting with a good deal of resistance; and as a further punishment a blockade was imposed against the tribe, which was only withdrawn in 1900. These measures appear to have made some impression upon the Abors, and their conduct of recent years has been satisfactory. A full account of their manners and customs will be found in Colonel Dalton's *Ethnology of Bengal.*

Mishmi Hills.—A section of the mountain ranges on the northern frontier of Assam, which shut in the eastern end of the valley of the Brahmaputra, between the Dibāng and the Brahmaputra. These hills are occupied by the Mishmi tribe, and have never been properly explored. They consist, as far as is known, of steep ridges, covered as a rule with tree forest, and some of the peaks are over 15,000 feet in height. Geologically, these hills seem to be a continuation of the Burmese axials. The higher ranges are probably composed of gneiss and granite, and there are reasons for supposing that they may contain deposits of economic value. Limestone boulders are found in the beds of the rivers issuing from them.

The Mishmis are divided into four tribes: the Chulikāttā or 'crop-haired,' the Bebejiya, the Digāru, and the Migu or Midhi. They are a short, sturdy race of the Tibeto-Burman stock, with features of a Mongolian type. They are keen traders and devoted to a pastoral rather than to an agricultural life, cattle and wives being the chief outward sign of wealth. The first expedition into the Mishmi country was in 1827, and further attempts were made in 1836 and 1845; but none of the explorers succeeded in getting more than three-quarters of the way to Rimā, the frontier town of Tibet. In 1851 M. Krick, a French missionary, reached that place and returned in safety to Assam; but on his revisiting the country in 1854 he was treacherously murdered by a Mishmi chief. The offender was captured and taken to Dibrugarh, where he was duly convicted and hanged; and attempts were again made in 1869 and 1879 to reach the valley of the Zayul, as the eastern arm of the Brahmaputra is called, but they were unsuccessful. In

the cold season of 1885–6, Mr. Needham and Captain Molesworth marched from Sadiyā to Rimā, but were prevented from going beyond that place by the obstructive attitude of the Tibetan authorities. The path followed ran along the north bank of the Brahmaputra, the total distance traversed being 187 miles. For the first 46 miles it lies entirely in the plains, and for this portion of the journey elephants can be used for transport. From thence to the Tibetan border, 26 miles west of Rimā, travelling is somewhat difficult. The track is rugged and uneven, and crosses ranges of hills varying from 1,000 to 3,500 feet in height; but these difficulties disappear on entering the Zayul valley. The upper portion of this valley was described by M. Krick as a tract cultivated as far as the eye could see, and abounding in herds of oxen, asses, horses, and mules, and in groves of bamboo, laurel, orange, citron, and peach trees. Pandit A. K., who entered the valley from the east, described the winter crops as rice, millets, and pulses, while wheat, barley, and mustard ripened in the spring. The Mishmis do a good deal of trade both with the Zayul valley and with Assam. They receive from the Tibetans cattle, woollen coats, swords, metal vessels, and other articles, and give them in exchange Mishmi *teeta* (a plant much valued as a febrifuge), musk, and Mishmi poison.

In 1899 the Bebejiya Mishmis murdered three Khamti British subjects and carried off three children. An expedition was dispatched against them in the following cold season, which, after a tedious and difficult march, succeeded in recovering the captives and burning the guilty villages. The Bebejiya country lies to the east of the Dibāng river, and was entered by the Maizu pass, which is 8,900 feet above sea-level. An account of the Mishmis will be found in Colonel Dalton's *Ethnology of Bengal*.

Khamti Hills.—A hilly country on the frontier of Assam, lying at the eastern end of the Brahmaputra Valley and inhabited by the Khamtis, a tribe of Shan origin, who are said to have migrated northwards to the hills near the upper waters of the Irrawaddy and Mekong when Mogaung was conquered by the Burman king, Alaungpayā, about the middle of the eighteenth century. A section of the tribe moved on into Assam and settled near Sadiyā, and their leader succeeded in establishing his position as the feudal chief of the surrounding country. He was recognized by the British when they took over the territories of the Ahom prince; but his son declined to abide by the decisions of the local British officer,

and was deprived of his office and dignities. The Khamtis then rose, raided the settlement at Sadiyā, and killed the commanding officer, Colonel White, in 1839. The rising was, however, quickly suppressed, and no trouble has since been given by the tribe.

Bor Khamti, the principal stronghold of this people, consists of the valley of the Namkiu (the western branch of the Irrawaddy) with the surrounding hills. It can be reached via the Pātkai and the Hukawng valley, or by a route running south-east from Sadiyā up the valley of the Diyun, over the Chaukan pass, which is 8,400 feet above the level of the sea. The distance from Sadiyā to Putau, the principal Bor Khamti village, is 197 miles. After Bishi the path is very difficult in places, running through dense forests where there are no villages and no means of obtaining supplies. Oaks, rhododendrons, and beeches grow freely on the hills, and large game, such as elephants and rhinoceros, are common. Putau is situated in a valley, shut in on every side except the south by hills, which in the winter are crowned with snow. The valley is about 25 miles long by 15 broad, and is about 1,500 feet above sea-level. The villages are surrounded with a palisade about 12 feet high, made of split trees interlaced with bamboo. The houses are large, commodious structures built on piles, and the audience chamber in the Rājā's house is 50 feet in length by 40 wide. Rice is the staple crop grown in the valley, but pulse and poppy are also cultivated, the Khamtis being much addicted to the use of opium. The people are much more civilized than most of the hill tribes on the north-east frontier, and near Putau there is a brick-built temple 95 feet high with a gilded cupola. Some of the images of Buddha in this temple are of considerable artistic merit. The Khamtis seem to stand in some awe of the Singphos, who adjoin them on the west, and also of the Khakus, said to be of the same race as the Singphos, who occupy the hills on the east. Little is known about the geology of the tract, but pyrite, chalco-pyrite, and galena have been found. An account of the Khamtis will be found in Colonel Dalton's *Ethnology of Bengal.*

Singpho Hills.—A tract of hilly country lying to the south-east of Lakhimpur District, Assam, inhabited by the Singphos, or Kachins as they are called in Upper Burma. Their original home seems to have been near the sources of the Irrawaddy, but they have gradually moved southwards, crossing the Hukawng valley and the Pātkai range, and have entered the

valley of the Brahmaputra. The Singphos first settled in Assam towards the end of the eighteenth century, their villages being located on the Buri Dihing and on the Tengapāni east of Sadiyā. By degrees they assumed a state of semi-independence, and offered some resistance to our troops when Upper Assam came under British rule. It was then found that their villages were full of Assamese slaves, and no less than 6,000 were released by Captain Neufville, the officer in command. The Singphos live in small villages, several of which usually own a quasi-allegiance to one chief. Their houses are raised on piles, and are often 100 feet in length by 20 broad, with an open balcony at the end where the women of the family sit and work. They form a large element in the population of the Hukawng valley which lies to the south of the Pātkai range.

Manabum.—A range of hills on the extreme eastern frontier of Lakhimpur District, Assam, lying between 27° 30′ and 27° 47′ N. and 95° 54′ and 96° 18′ E. These hills are an outlying spur of the mountain country occupied by the Singphos and Khamtis, and mark the eastern limit of the administrative jurisdiction of the British Government.

Daphābum.—A mountain ridge, situated between 27° 28′ and 27° 47′ N. and 96° 14′ and 96° 55′ E., to the east of Lakhimpur District, Assam. The summit of the highest peak is 15,008 feet above sea-level.

Pātkai.—A range of hills lying to the south of Lakhimpur District, Assam, between 26° 30′ and 27° 15′ N. and 95° 15′ and 96° 15′ E. The general height of the range is about 4,000 feet, but it contains summits nearly 7,000 feet in height. The hills are composed of Upper Tertiary rocks, and their sides are clothed with dense forest. The pass over the Pātkai is the recognized route between Burma and the Assam Valley, though, as it entails a long march through wild and hilly country, there is little intercourse between the two Provinces. It was by this route that the Ahoms entered the valley of the Brahmaputra in the thirteenth century; and it was used by the Burmans when they were summoned to Assam at the beginning of the nineteenth century to assist Chandra Kanta, one of the last of the Ahom Rājās. In 1837 Dr. Griffiths crossed the Pātkai into the Hukawng valley, and in 1896 a railway survey party traversed the range. The construction of a line from Ledo in Lakhimpur District over the Pātkai and down the Hukawng valley to Taungni station in the Mu valley was estimated to cost 383 lakhs for a total length of

284 miles. The line, if made, would be carried through the summit of the Pātkai in a tunnel 5,000 feet in length and situated 2,750 feet above the level of the sea. The rocks in that neighbourhood consist of an indurated sandstone. The hills are inhabited by Nāgā tribes. Those who live on the Hukawng side of the watershed are subject to Singpho chiefs. They are armed with *daos*, muskets, and cross-bows, and their villages are usually well situated for defence. An account of these people is annexed to the report of the railway survey party.

Mīkīr Hills.—A tract of hilly country in Nowgong and Sibsāgar Districts, Eastern Bengal and Assam, lying between the Assam Range and the Brahmaputra, about 26° 30′ N. and 93° 30′ E., but cut off from the main mountain system by the valleys of the Dhansiri on the east, and of the Kapili and its tributaries on the west. The northern hills are composed of gneissic rocks, which towards the south are overlain by sedimentary strata of Tertiary origin. These younger rocks consist of soft yellow sandstones, finely laminated grey clay shales, and nodular earthy limestone. Limestone is found near the Nāmbar, Deopāni, Hariājān, and Jamunā rivers, and iron ore is of widespread occurrence, though the haematite is seldom sufficiently concentrated to pay for working. Coal of inferior quality is found near the Langlei hill and the Nāmbar river. The hills have steep slopes, and both they and the intervening valleys are covered with dense jungle. They extend over an area of about 2,000 square miles and average from 1,000 to 2,000 feet above the sea, though the loftiest summits attain a height of nearly 4,500 feet. The Mīkīrs, the tribe inhabiting these hills, speak a language which occupies an intermediate position between Bodo or Kachāri and the various forms of Nāgā speech. In character and habits they differ entirely from the savage hillmen to the south, and are quieter and more timid than any other tribe in Assam. Dalton states[1] that they were originally driven from the hills of North Cāchār to the Jaintiā Hills, where they are still to be found in considerable numbers; but the majority of the tribe were displeased with the treatment they received, and moved to the locality which has since borne their name. Similar migrations were undertaken by the Lalungs, a kindred neighbouring tribe, who according to their traditions went to the Jaintiā Hills to escape the necessity of providing the Kachāri Rājā with a daily ration of six seers of human milk, and left because they did

[1] *Ethnology of Bengal*, p. 54.

not like the matriarchal theory of inheritance there in force. The Mīkīrs are said to have been compelled to forswear the use of arms by the Ahom government, and this is offered as an explanation of their present peaceful disposition. They live in small hamlets near the crops of rice, cotton, and chillies which they raise on the hill-side. Their houses are large and strongly built, and are raised on platforms above the ground. Rice is their staple food, but they eat fowls and pork and consume large quantities of fermented liquor.

[E. Stack, *The Mīkīrs* (1908).]

Assam Range.—A range of hills lying between 24° 58′ and 26° 48′ N. and 89° 49′ and 94° 50′ E., which runs almost due east and west between the valleys of the Brahmaputra and Surmā. It consists of the GĀRO, KHĀSI and JAINTIĀ, NORTH CĀCHĀR, and NĀGĀ HILLS, and at its eastern end trends towards the north and is joined by the PĀTKAI to the Himālayan system, and by the mountains of Manipur to the Arakan Yoma. The general elevation is from 3,000 to 6,000 feet, but at Jāpvo in the Nāgā Hills a height of nearly 10,000 feet is attained. The Shillong peak (6,450 feet) is the highest point in the Khāsi Hills. Geologically, the range falls into two groups. The Gāro, Khāsi and Jaintiā Hills, and part of North Cāchār are known as the Shillong plateau, and consist for the most part of a great mass of gneiss. The eastern portion is mainly composed of sandstones of Tertiary age. Coal is found in the Gāro and Khāsi Hills, and in the hills south of Lakhimpur, and lime on the face of the Khāsi Hills overlooking the plains of Sylhet. Through the greater part of their length the hills take the form of sharply serrated ridges covered with dense forest, but the central portion of the Khāsi Hills is an elevated plateau consisting of rolling downs covered with short grass.

Barail ('big dike').—Range of hills in North Cāchār, Eastern Bengal and Assam, running east and west between 25° 5′ and 25° 20′ N. and 92° 32′ and 93° 29′ E., and connecting the Nāgā and Jaintiā Hills. The range, which is for the most part composed of soft greenish sandstone, has sharply serrated ridges, and is covered with dense forest and bamboo jungle. Several of the peaks are nearly 6,000 feet in height. The Jātingā river makes its way through these hills to the Barāk, and the Assam-Bengal Railway has been carried up the valley of that river.

Jāpvo.—The highest mountain in Assam (9,890 feet),

situated in 25° 36′ N. and 94° 4′ E., in the Assam Range a little to the south of Kohīmā (Nāgā Hills District).

Nokrek.—The highest peak in the range of hills on the western slope of which lies Turā, the head-quarters of the Gāro Hills District, Eastern Bengal and Assam. This range rises sharply from the lower hills by which it is surrounded, and the summit and sides are clad in dense tree forest. Nokrek is situated in 25° 27′ N. and 90° 19′ E., and reaches a height of 4,652 feet above the level of the sea.

Tukreswari.—Hill in the Habrāghāt *pargana*, Goālpāra District, Eastern Bengal and Assam, situated in 26° 3′ N. and 90° 38′ E., on the summit of which stood a temple dedicated to Durgā built by a former Rājā of Bijni. Its construction indicated considerable engineering skill on the part of the architect, and it was frequented by pilgrims from all parts of India. The temple was destroyed in the earthquake of 1897, but is now being rebuilt.

Saraspur (or Siddheswar Hills).—A range projecting from the Lushai system into the Surmā Valley, Assam. The hills run north and south between 24° 26′ and 24° 52′ N. and 92° 30′ and 92° 35′ E., forming the boundary between Sylhet and Cāchār. The height varies from 600 feet to 2,000 feet above sea-level; the slopes of the hills are steep and covered with tree forest, and are composed of sandstones and shales of Tertiary origin.

Bhuban Hills.—A range of hills projecting from the Lushai system into the south of Cāchār District, Eastern Bengal and Assam. They run north and south between 24° 15′ and 24° 45′ N. and 92° 52′ and 93° 5′ E., on the eastern border of the District, forming the watershed between the Barāk and Sonai rivers. Their height varies from 700 feet to 3,000 feet, and their slopes are very precipitous. They are formed of sandstones and shales of Tertiary origin, thrown into long folds. A temple sacred to Bhuban Baba, a local name for Siva, stands on the summit of a hill about 30 miles south-east of Silchar. Manipurīs, up-country men, and garden coolies resort to this place on the occasion of the Sivarātrī, the Srīpanchami, and the Barunisnan festivals, when they bathe in a tank in the neighbourhood of the temple, and make offerings at the shrine.

Chalan Bīl.—Marshy lake situated on the borders of Rājshāhi and Pābna Districts, Eastern Bengal and Assam, between 24° 10′ and 24° 30′ N. and 89° 10′ and 89° 20′ E. The length from north-west to south-east is 21 miles; the

greatest breadth 10 miles; and the total area about 150 square miles in the rains, shrinking to 20 square miles during the dry season, when the average depth is 3 feet. A tortuous navigable channel runs through it, with a depth of from 6 to 12 feet all the year round. The principal feeder of the lake is the Atrai, whose waters eventually find their way into the Brahmaputra through an outlet at the south-east corner. Land to the south and east which once formed part of the marsh is now dry; but its waters are encroaching towards the north-west, and to prevent this commissioners have been appointed to carry out a scheme for the removal of obstructions to the drainage. The lake abounds in fish and waterfowl, and the value of the annual export of fish is estimated at Rs. 60,000.

Loktak.—Lake situated in the south of Manipur State, Assam, between 24° 27′ and 24° 34′ N. and 93° 47′ and 93° 52′ E. It now covers about 27 square miles, but is said to be gradually decreasing in size. The surface is dotted with floating islands of aquatic plants, forming a refuge for fish and wild-fowl, which are found here in large numbers. At the southern end, where a range of low hills runs into the lake, there are rocky islands, the sites of fishing villages.

Hātia.—Island in Noākhāli District, Eastern Bengal and Assam, situated in the estuary of the Meghnā river, and lying between 22° 25′ and 22° 42′ N. and 90° 53′ and 91° 9′ E., with an area of 185 square miles. It contains 49 villages, and in 1901 had a population of 55,390, the average density being 299 persons per square mile. Muhammadans numbered 44,000 and Hindus 11,000. The island lies low, and is only partially protected by embankments from the incursions of the sea. It is thus exposed to storm-waves, and the great cyclone of 1876 destroyed 30,000 persons, or more than half the population.

Sandwīp.—Island off the coast of Noākhāli District, Eastern Bengal and Assam, lying between 22° 23′ and 22° 37′ N. and 91° 21′ and 91° 33′ E., and probably formed by the deposit of silt from the Meghnā. The area is 258 square miles, and the population in 1901 was 115,127, dwelling in 59 villages.

The island has an interesting history. Cesare de' Federici, the Venetian traveller, writing in 1565, described it as densely populated and well cultivated; he added that 200 ships were laden yearly with salt, and that such was the abundance of materials for ship-building that the Sultān of Constantinople found it cheaper to have his vessels built here than at Alexandria. In 1609 the island was captured from the Muhammadans by a number of Portuguese who had been expelled from the

employ of the Rājā of Arakan. Headed by one Gonzales, these pirates established themselves in force on the island and seized Shāhbāzpur and Pātelbanga, with an army of 1,000 Portuguese, 2,000 sepoys, and 200 cavalry, and a navy of 80 armed vessels. In 1610 they allied themselves with the Rājā of Arakan in an attempt to invade Bengal, but after some successes they were routed by the Mughal troops. In 1615 an attack upon Arakan was made by Gonzales with the help of Portuguese troops from Goa, but this failed; and in the following year the Rājā of Arakan invaded Sandwīp, defeated Gonzales, and took possession of the island. For the next fifty years Sandwīp was a nest of Portuguese and Arakanese pirates who devastated the neighbouring coasts of Bengal, but in 1664 the Nawāb Shaista Khān determined to put an end to their depredations. By dint of promises and cajolery he induced the Portuguese to desert to his side, and used them in an attack upon Sandwīp in 1665 which was entirely successful. The island, however, long remained an Alsatia for all the bad characters of Eastern Bengal, and its administration was a constant cause of trouble in the early years of British rule. The last pirate of note was Dilāl Rājā. He is remembered for his attempts to produce a high physical type among the islanders by compelling members of different castes to intermarry. The result has been a confusion of castes upon the island, which has given it a sinister reputation on the mainland. Until 1822 Sandwīp formed part of Chittagong District, but in that year it was made over to the newly formed District of Noākhāli. A Sub-Deputy-Magistrate-Collector and a Munsif are stationed there.

From its low-lying position Sandwīp is peculiarly exposed to inundation from storm-waves, and it suffered severely in loss of life and property by the cyclones of 1864 and 1876. The number of deaths caused by the latter was estimated at 40,000, or nearly half the population, and its effects were aggravated by a terrible epidemic of cholera which immediately followed. Since this disaster the population has rapidly increased, as it was returned at only 72,467 in 1881; the density is now 446 persons per square mile.

Kutubdiā.—Island off the coast of Chittagong District, Eastern Bengal and Assam, lying between 21° 43′ and 21° 55′ N. and 91° 49′ and 91° 54′ E., with an area of 35 square miles. Population (1901), 10,693. The island is protected by a ring of embankments constructed and maintained by Government; but these were breached in the cyclone of 1897, which caused

great havoc. Almost the whole of the island is a Government *ryotwāri* estate. There is a lighthouse on the west coast.

Maiskhāl.—Island off the coast of Chittagong District, Eastern Bengal and Assam, lying between 21° 29′ and 21° 45′ N. and 91° 50′ and 91° 58′ E., with an area of 102 square miles. Population (1901), 24,228. Through the centre and along the east coast-line rises a range of low hills 300 feet high; the west and north are fringed by mangrove jungle and are of the same character as the Sundarbans. Among the hills is built the shrine of Adināth, which attracts pilgrims from all parts of the District. The greater portion of the island belongs to a permanently settled estate.

Mājuli.—Island (or *char*) in the north of Sibsāgar District, Assam, lying between 26° 45′ and 27° 12′ N. and 93° 39′ and 94° 35′ E., formed by the diversion of the Kherkutiā channel from the main stream of the Brahmaputra. This channel subsequently receives the waters of the Subansirī, in itself a large river, and is then known as the Luhit to the point where it rejoins the parent stream opposite the mouth of the Dhansiri. The island has an area of 485 square miles, with a population (1901) of 35,000, and is the site of the AUNIĀTI, DAKHINPĀT, GARAMUR, and other *sattras*, or priestly colleges, which are held in great reverence by the Assamese. The Mājuli is much exposed to flood and diluvium, and the staple crops are summer rice and mustard. It contains numerous streams, lakes, and patches of tree forest covered with beautiful cane brake; and the general effect is very picturesque. The island has but one road and no town, and an old-world air pervades the place which savours more of the eighteenth than the twentieth century.

Ganges (*Gangā*).—The great river of Northern India which carries off the drainage of the Southern Himālayas, and also a smaller volume received from the northern and eastern slopes of the Vindhyas. It rises in the Tehrī State, in 30° 55′ N. and 79° 7′ E., where it issues under the name of Bhāgīrathi from an ice cave at the foot of a Himālayan snow-bed near Gangotrī, 13,800 feet above the level of the sea. During its earlier course it receives the Jāhnavī from the north-west, and subsequently the Alaknandā, after which the united stream is called Ganges. It pierces the Himālayas at Sukhī, and turns south-west to Hardwār. From this point it flows south and south-east between the Meerut and Rohilkhand Divisions of the United Provinces, and then separates

In the United Provinces.

the latter from the Agra Division, and flows through the eastern part of Farrukhābād District. It next forms the south-western boundary of Oudh, and then crosses the Districts of Allahābād, Mirzāpur, Benares, and Ghāzīpur, after which it divides the Districts of Ghāzīpur and Balliā from Bengal. The Ganges is a considerable river even at Hardwār, where the Upper Ganges Canal starts; and it is tapped again at Naraura for the Lower Ganges Canal. It thus supplies the largest irrigation works in the United Provinces, and is also the source of the water-supply of the cities of Meerut (by a canal), Cawnpore, and Benares. Its chief tributaries are: the Rāmgangā (Farrukhābād), Jumna and Tons (Allahābād), Gumtī (Ghāzīpur), and Gogrā (Balliā), while smaller affluents are the Mālin (Bijnor), Būrhgangā (Meerut), Mahāwa (Budaun), Sot or Yār-i-Wafādār (Shāhjahānpur), Būrhgangā and Kālī Nadī (Farrukhābād), Isan (Cawnpore), Pāndū (Fatehpur), Jirgo (Mirzāpur), Barnā (Benares), Gāngī and Besū (Ghāzīpur), and Chhotī Sarjū (Balliā), which is called the Tons in its upper portion. The principal towns on or near its banks in the United Provinces are: Srīnagar (on the Alaknandā), Hardwār, Garhmuktesar, Anūpshahr, Soron, Farrukhābād (now left some miles away), Kanauj, Bilhaur, Bithūr, Cawnpore, Dalmau, Mānikpur, Karā, Allahābād, Sirsā, Mirzāpur, Chunār, Benares, Ghāzīpur, and Balliā.

In Bengal. Impinging on Shāhābād District of Bengal, in 25° 31′ N. and 83° 52′ E., the Ganges forms the boundary of this District, separating it from the United Provinces, till it receives as a tributary the Gogrā on the north bank. It shortly afterwards receives another important tributary, the Son, from the south, then passes Patna, and obtains another accession to its volume from the Gandak, which rises in Nepāl. Farther to the east, it receives the Kosī, and then, skirting the Rājmahāl Hills, turns sharply to the south, passing near the site of the ruined city of Gaur. About 20 miles farther on, the Ganges begins to branch out over the level country; and this spot marks the commencement of its delta, being 220 miles in a straight line, or nearly 300 by the windings of the river, from the Bay of Bengal. The present main channel, assuming the name of the PADMĀ, proceeds in a south-easterly direction past Pābna to Goalundo, where it is joined by the Jamunā, the main stream of the BRAHMAPUTRA. The bed is here several miles wide, and the river is split up into several channels, flowing between constantly shifting sandbanks and islands. During the rains the current is very strong, and even steamers find

difficulty in making headway against it. This vast confluence of water rushes towards the sea, joining the great MEGHNĀ estuary in 23° 13′ N. and 90° 33′ E., after the Ganges has had a course of 540 miles in Bengal, and 1,557 miles from its source.

The delta.

The Meghnā estuary, however, is only the largest and most easterly of a great number of Ganges mouths, among which may be mentioned the Hooghly, Mātla, Raimangal, Mālanchā, and Haringhāta. The most westerly and the most important for navigation is the Hooghly, on which stands Calcutta. This receives the water of the three westernmost distributary channels that start from the parent Ganges in Murshidābād District (generally known as the Nadiā Rivers, one of which takes again the name of Bhāgīrathi), and it is to this exit that the sanctity of the river clings. Between the Hooghly on the west and the Meghnā on the east lies the Ganges delta. The upper angle of this consists of the Districts of Murshidābād, Nadiā, Jessore, and the Twenty-four Parganas. These Districts have for the most part been raised above the level of periodical inundation by the silt deposits of the Ganges and its offshoots; and deltaic conditions now exist only in the eastern Districts of Khulnā, Farīdpur, and Backergunge, and towards the southern base of the delta, where the country sinks into a series of great swamps, intersected by a network of innumerable channels, and known as the Sundarbans.

In its course through Bengal, the Ganges rolls majestically down to the sea in a bountiful stream, which never becomes a merely destructive torrent in the rains and never dwindles away in the hottest summer. Embankments are seldom required to restrain its inundations, for the alluvial silt which it spills over its banks, year by year, affords to the fields a top-dressing of inexhaustible fertility. If one crop be drowned by the flood, the cultivator calculates that his second crop will abundantly requite him. In Eastern Bengal, in fact, the periodic inundations of the Ganges and its distributaries render the country immune from the results of a scanty rainfall and make artificial irrigation unnecessary.

Until some 400 years ago the course of the Ganges, after entering Bengal proper, was by the channel of the Bhāgīrathi and Hooghly as far as the modern Calcutta, whence it branched south-eastwards to the sea, down what is still known as the Adi Gangā, which corresponds for part of its course with Tolly's Nullah. By degrees this channel silted up and

became unequal to its task, and the main stream of the Ganges was thus obliged to seek another outlet. In this way the Ichāmatī, the Jalangī, and the Mātābhānga became in turn the main stream. The river tended ever to the east; and at last, aided perhaps by one of the periodic subsidences of the unstable surface of the country, it broke eastwards right across the old drainage channels, until it was met and stopped by the Brahmaputra. Great changes still take place from time to time in the river-bed, and alter the face of the country. Extensive islands are thrown up and attach themselves to the bank; while the river deserts its old bed and seeks a new channel, it may be many miles off. Such changes are so rapid and on so vast a scale, and the eroding power of the current upon the bank is so irresistible, that it is considered perilous to build any structure of a large or permanent character on the margin.

Sacred places.

The junction of two or more rivers, called Prayāg, is usually considered sacred; but that of the Ganges and Jumna at Allahābād, where according to popular belief a third river, the Saraswatī, which sinks into the sands at Bhatner in Rājputāna, reappears from its subterranean course, is one of the most holy places in India. Here, on the spit of land below the fort, a large bathing festival is held annually in the month of Māgh (January). Every twelve years the fair is called the *Kumbh melā*, as it is held when Jupiter is in Aquarius (*kumbh*) and the sun in Aries, and the efficacy of bathing is increased, large numbers of pilgrims from every part of India flocking to the junction. At the *Kumbh melā* in 1894 the attendance was estimated at a million to a million and a half.

The holiest places upon the banks of the Ganges in Bengal are Sonpur at its confluence with the Gandak, and Sāgar Island at the mouth of the Hooghly. Both places are the scene of annual bathing festivals, which are frequented by thousands of pilgrims from all parts of India. Even at the present day, the six years' pilgrimage from the source of the Ganges to its mouth, and back again, known as *pradakshina*, is performed by many; and a few fanatical devotees may be seen wearily accomplishing this meritorious penance by measuring their length.

Most rivers in India have sanctity attached to them, but the Ganges is especially sacred. Its importance in Vedic literature is slight, but in the epics and Purānas it receives much attention. Sāgar, the thirty-eighth king of the Solar Dynasty, had

performed the great horse-sacrifice (*Asvamedha*) ninety-nine times. In this ceremony the horse wandered over the world, unhaltered and never guided or driven. Every country it entered was conquered by the following army, and on its return it was sacrificed to the gods. When Sāgar drove out a horse for the hundredth time, the god Indra stole it and tied it up in Pātāl (the under-world) near the place where a sage, Kapila Muni, was meditating. Sāgar had two wives, one of whom bore Asmanjas, and the other had sixty thousand sons who were following the horse. The sons found it, and believing Kapila to be the thief abused him, and were consumed to ashes in consequence of the sage's curse. Ansmān, son of Asmanjas, had gone in search of his uncles, and finding the horse took it home. Garuda, the mythical half-man, half-bird, king of the snakes, told him that the sin of those who had abused Kapila could best be removed by bringing to earth the Ganges, which then flowed in heaven (Brahmā Lok). In spite of much prayer and the practice of austerities by Ansmān and his son, Dalīp, this could not be brought about; but Bhāgīrath, son of Dalīp, persuaded Brahmā to grant him a boon, and he chose the long-sought permission to allow the Ganges to flow on this world. Brahmā agreed, but told Bhāgīrath that the earth could not sustain the shock, and advised him to consult Siva, who consented to break the force of the river by allowing it to fall on his head. The ice-cavern beneath the glacier, from which the stream descends, is represented as the tangled hair of Siva. One branch, the Mandākinī, still flows through Brahmā Lok; a second, which passes through Pātāl, washed away the sin of the sixty thousand; and the third branch is the Ganges[1]. Besides the places which have already been referred to, Gangotrī, near the source, Devaprayāg, Garhmuktesar, Soron, Dalmau, and Benares are the principal bathing resorts. The sanctity of the river still exists everywhere, though according to prophecy it should have passed away to the Narbadā a few years ago. Dying persons are taken to expire on its banks, corpses are carried to be burned there, and the ashes of the dead are brought from long distances to be thrown into its holy stream, in the hope of attaining eternal bliss for the deceased. About the time of the regular festivals the roads to the river are crowded with pilgrims, who keep up an incessant cry of salutation to the great goddess, *Gangā jī kī jai!* On their return

[1] A variant of the legend represents the ashes of the sixty thousand as having been purified by the Bhāgīrathi, a branch of the Ganges.

they carry away bottles of the sacred water to their less fortunate relations.

Traffic. Till within the last forty years of the nineteenth century, after which the extension of railways provided a quicker means of transport, the magnificent stream of the Ganges formed almost the sole channel of traffic between Upper India and the sea-board, and high masonry landing-places for steamers still exist at Allahābād and other places lower down, though they are no longer used. The products of the Gangetic plain, and the cotton of the Central Provinces and Central India, used formerly to be conveyed by this route to Calcutta. At present it is chiefly used for the carriage of wood and grain in many parts of its course, and also of oilseeds, saltpetre, stone, and sugar in the eastern portion of the United Provinces. The principal import to these Provinces is rice, but manufactured goods and metals are also carried in considerable quantities. The canal dam at Naraura in Bulandshahr District has stopped through traffic between the upper and lower courses of the Ganges.

In Bengal, however, the Ganges may yet rank as one of the most-frequented waterways in the world. The downward traffic is most brisk in the rainy season, when the river comes down in flood. During the rest of the year the boats make their way back up stream, often without cargoes, either helped by a favourable wind or laboriously towed along the bank. The most important traffic in Bengal is in food-grains and oilseeds; and, though no complete statistics are available, it appears probable that the actual amount of traffic on the Ganges by native craft has not at all diminished since the opening of the railway, to which the river is not only a rival, but a feeder. Railway stations situated on the banks form centres of collection and distribution for the surrounding country, and fishing villages like Goalundo have by this means been raised into river marts of the first magnitude. Steamer services ply along its whole course within Bengal, and many towns lie on its banks, the most important being Patna and Monghyr.

Bridges. Six railway bridges cross the Ganges: near Roorkee, at Garhmuktesar (2,332 feet), Rājghāt, Cawnpore (2,900 feet), and Benares (3,518 feet), while the sixth, measuring 3,000 feet, was completed near Allahābād in 1905. There is no bridge below Benares, though the construction of a railway bridge near Sāra Ghāt in Bengal has been sanctioned. The normal flood discharge varies from 207,000 cubic feet per second at Hardwār, where the bed is steep and only 2,500 feet wide, to 300,000 at

Garhmuktesar and 150,000 at Naraura (width at canal weir and about a mile above it, 3,880 feet). The bridge at Allahābād is designed to allow the discharge of a million cubic feet per second. The normal flood-level falls from 942 feet above the sea at Hardwār to 287 at Allahābād.

Mahānandā.—River of North Bengal and Eastern Bengal, important in the past as forming a boundary between historical divisions of the country, and still much used as a means of communication in its lower reaches. Rising in Mahāldirām, a mountain in the Himālayan range in Darjeeling District, in 26° 56′ N. and 88° 20′ E., it flows generally in a southerly direction till it joins the Ganges in Mālda District, in 24° 28′ N. and 88° 18′ E., after a course of 256 miles. It was formerly a large river and formed the western boundary of the Bārendra division of Bengal, and still earlier of the kingdom of Pundra, or Paundravardhana, the country of the Pods, whose capital was at MAHĀSTHĀN; and it has had a great influence on the recent ethnic distribution of the people. East of its course, the Koch, or Rājbansis of North Bengal, are the chief element in the population, while to the west they are scarcely found at all. A large proportion of this race are now followers of Islām, and east of the river Musalmāns predominate, while to the west the population is mainly Hindu. It is also a linguistic boundary, Hindī being spoken to the west of it and Bengali to the east.

The Mahānandā touches upon Jalpaigurī District near the foot of the hills, a short distance above Silīgurī, at which place it receives the waters of the New Bālāsan; and the united stream forms the boundary between that District and Darjeeling for a short distance before it passes into Purnea at Titālya. It has a very rapid current in the upper part of its course, and is subject to heavy freshes which render navigation impracticable. After a tortuous course through Purnea, in which District its chief tributaries are the Dānk, Pitānu, Nāgar, Mechī, and Kankai, and its principal marts Kishanganj and Bārsoi, it enters Mālda and flows south-east through that District, which it divides into two nearly equal portions. It here receives as affluents the Tāngan, Pūrnabhabā, and Kālindrī, which drain the greater portion of Dinājpur, and eventually falls into the Ganges at GODĀGĀRI.

Jamunā (1).—River of Eastern Bengal, probably representing one of the old channels of the TĪSTA. It rises in Dinājpur District, not far from the boundary of Rangpur (25° 38′ N. and 88° 54′ E.), and, flowing due south along the

border of Bogra, finally falls into the Atrai, itself a tributary of the Ganges, near the village of Bhawānīpur in Rājshāhi District (24° 38′ N. and 88° 57′ E.), after a total length of 89 miles. In the lower part of its course the Jamunā is navigated all the year round by country boats of considerable burden, but higher up it is navigable only during the rainy season. The chief river marts on the banks of the Jamunā are Phulbāri and Birāmpur in Dinājpur District, and HILLI in Bogra, just beyond the Dinājpur boundary.

Ichāmatī (1).—River of Pābna District, Eastern Bengal, which is mentioned in Martin's *Eastern India* in the description of Dinājpur. It is now fed by the Ganges, from which it is given off about 7 miles south-east of Pābna town, in 23° 56′ N. and 89° 20′ E. After passing Pābna, it flows through the District by a tortuous route, and joins the Hurāsāgar a short distance below the confluence of that river with the Baral. During the rains it becomes a wide and beautiful stream, but for eight months in the year it is little more than a dry sandy bed. As shown in the maps of Major Rennell, it would appear at one time to have been connected with the Karatoyā.

Garai.—The name given to the upper reaches of the MADHUMATĪ river in Bengal and Eastern Bengal, forming one of the principal channels by which the waters of the Ganges are carried to the sea, especially during the monsoon when the comparatively high level of the Brahmaputra prevents an exit by the more eastern channels. At a former period, while the Ganges was still working its way eastwards, the Garai probably formed its main eastern outlet, and during the nineteenth century there seemed a likelihood of the river reverting to this channel. The Garai, which leaves the Ganges near Kushtia in Nadiā District (23° 55′ N. and 89° 9′ E.), flows in a southerly direction from Ganeshpur to Haripur, about 32 miles; it is 420 yards wide in the rains, and navigable by steamers all the year round. It is spanned by a fine railway bridge of the Eastern Bengal State Railway.

[For an account of the history of this river see Fergusson's 'Some Recent Changes in the Delta of the Ganges,' *Journal of the Geographical Society*, vol. xviii, pp. 321 seq., and Hunter's *Statistical Account of Farīdpur*, pp. 265 seq.]

Madhumatī.—One of the principal distributaries of the GANGES in Bengal and Eastern Bengal, which leaves the parent stream not far from Kushtia, in Nadiā District, in 23° 55′ N. and 89° 9′ E., where it is called the GARAI. Thence flowing south it assumes the name of Madhumatī. It enters

Backergunge District near the north-west corner at Gopālganj; and from this point it takes the name of Baleswar, and forms the western boundary of the District, still flowing south, but with great windings in its upper reaches. It then crosses the Sundarbans, separating the Khulnā from the Backergunge portion of that tract, and enters the Bay of Bengal, after a course of 230 miles, in 21° 52′ N. and 89° 59′ E., under the name of Haringhāta, forming a fine deep estuary 9 miles broad. The river is navigable to opposite Morrelganj in the District of Khulnā by sea-going ships, and throughout its entire course by native boats of the largest tonnage. Although there is a bar at the mouth of the Haringhāta with only 17 feet of water at low tide, the navigation is easier than that of any other river at the head of the Bay of Bengal. The great banks or shoals, which have formed at each side of the mouth and which extend seaward for several miles, protect the entrance and act as break-waters to the swell. The river is not disturbed by the 'bore,' which visits the Hooghly and the Meghnā, and it is also free from mid-channel dangers. Among its chief tributaries are the Kacha in Backergunge; the Kālia or Gāngnī river, which receives a portion of the waters of the Nabagangā through the Bankarnali in Jessore; and the Bhairab in Khulnā.

Padmā.—The name of the main stream of the GANGES in the lower part of its course between the off-take of the Bhāgīrathi river in 24° 35′ N. and 88° 5′ E. and the south-eastern corner of Dacca District, where it joins the Meghnā in 23° 13′ N. and 90° 33′ E., after a course of 225 miles.

Brahmaputra ('Son of Brahmā').—River of Tibet and North-eastern India, which for its size and utility to man ranks among the most important in the world. Its total estimated length is about 1,800 miles, and its drainage area about 361,200 square miles, while during the rains the flood discharge at Goālpāra is said to be more than half a million cubic feet of water per second. An element of romance hangs over the river, as a certain portion of its course has never been actually explored, though there is little doubt that the Tsan-po, or great river of Tibet, pours its waters through the DIHĀNG into the river which is known as the Brahmaputra in the Assam Valley. The source of the Tsan-po is in 31° 30′ N. and 82° E., near the upper waters of the Indus and the Sutlej, and a little to the east of the Mānasarowar Lake. It has been traced almost continuously for a distance of 850 miles eastwards to Gya-la-Sindong, which is barely 150 miles from the Assam frontier; but no explorer has yet succeeded in following the

Upper course.

river right down to its junction with the Brahmaputra. It was at one time thought that the Tsan-po might be identical with the great river of Burma, the Irrawaddy, but explorations which terminated in 1882 proved that the course of the Tsan-po could not lie east of a place called Samā in the Zayul valley. It was then suggested that the river that flowed past Samā was not identical wiih the stream that runs westward from the Brahmakund to Sadiyā, but was a tributary of the Tsan-po, which flowed to the west of Samā into the plains of Burma. This theory was completely disproved by the explorations of Mr. Needham, who in 1885–6 marched from Sadiyā up the so-called Brahmaputra to Rimā, a village east of Samā, and proved that the river at Rimā and the river that flowed past Sadiyā were the same. The Tsan-po having no outlet towards Burma in any direction, there is little room for doubt with regard to its identity with the Brahmaputra. Granted this premise, it seems probable that the channel by which it makes its way through the Himālayas is the Dihāng, which is by far the largest river that falls into the Brahmaputra from the north, and at the point of junction considerably exceeds in volume the river flowing from the east, which, as it follows the same direction as the united stream in its passage down the valley, has been wrongly styled the Brahmaputra by the Assamese. In 1886–7 the Tsan-po was visited by a native explorer, who stated that he followed its course for nearly 100 miles south of Gya-la-Sindong to a place called Onlet, which is only 8 miles from Mīri Padam and 43 miles from the Assam frontier. At first sight, it may seem strange that a geographical problem of such interest as the identity of the Tsan-po and the Dihāng should still remain unsettled, and that such a small strip of territory should be allowed to remain unexplored. The hills through which the Dihāng makes its way present, however, great difficulties to the explorer, and are inhabited by fierce and hostile tribes of whom little is known. Activity in that region is politically undesirable; and even if no opposition was offered to the expedition, it is possible that an advance and subsequent retirement would be construed into a sign of weakness, which might embolden the hill tribes to make incursions on the frontier of Assam.

Tributaries.

The Dihāng at Pobha joins a river flowing from the east, which is sometimes styled the Brahmaputra, sometimes the Luhit. This river rises to the north-east of the hills inhabited by the Mishmis, and is known at Rimā as the Zayul Chu. Near Sadiyā, shortly above its junction with the Dihāng, it

receives the NOA DIHING from the southern, and the DIBĀNG and Sesseri from the northern bank. The most important tributaries that fall into the river west of the Dihāng are: on the north bank, the SUBANSIRĪ, BHARELI, DHANSIRI (2), BARNADĪ, MANĀS, SANKOSH, TORSĀ, and TĪSTA; and on the south bank the BURHI DIHING, DISĀNG, DIKHO, JHĀNZI, DHANSIRI (1), KULSI, and JINJIRĀM.

Below Dibrugarh the Brahmaputra at once assumes the characteristics by which it is generally known. It rolls along through the plain with a vast expanse of water, broken by innumerable islands, and exhibiting the operations of alluvion and diluvion on a gigantic scale. It is so heavily freighted with suspended matter that the least impediment in its stream causes a deposit, and may give rise to a wide-spreading almond-shaped sandbank. On either side the great river throws out large branches, which rejoin the main channel after a divergence of many miles. One of these divergent channels takes off from the main stream, under the name of the Kherkutiā Suti, opposite Burhi Dihingmukh. It receives the great volume of the Subansirī, and is then called the Luhit, and thus reinforced, rejoins the main stream nearly opposite Dhansirimukh. The large island or *char* of MĀJULI, with an area of 485 square miles, is enclosed between it and the main stream. Another large divergent channel is the KALANG, which takes off from the south bank opposite Bishnāth in Darrang District, and traverses the whole of Nowgong District west of that point, rejoining the Brahmaputra a short distance above Gauhāti. In Assam

Unlike many rivers that flow through flat low-lying plains, instead of creeping along in a sluggish channel, the Brahmaputra in the Assam Valley has a comparatively swift current, and possesses no high permanent banks. At certain points in its course it passes between or by rocky eminences, which give a temporary fixity to its channel, as at Bishnāth, Silghāt, Tezpur, Singriparbat, Gauhāti, Hāthimurā, Goālpāra, and Dhubri. Where not so controlled, it sends its shifting channels over a vast extent of country, without forming any single continuous river trough.

After a course of 450 miles south-west down the Assam Valley, the Brahmaputra sweeps southward round the spurs of the Gāro Hills, which form the outwork of the watershed separating it from the river system of the Surmā in Sylhet. It enters Rangpur District in 25° 47′ N. and 89° 49′ E., and its southerly course continues thence for about 148 miles, under In Easte[rn] Bengal.

the name of the JAMUNĀ (2), through the open plains of Eastern Bengal, as far as its confluence with the Padmā, or main stream of the GANGES, at Goalundo in 23° 51′ N. and 89° 46′ E. The united rivers subsequently join the MEGHNĀ estuary opposite Chāndpur, in 23° 13′ N. and 90° 33′ E. The main stream of the Brahmaputra formerly flowed south-east across the centre of Mymensingh District, and, after discharging its silt into the Sylhet swamps and receiving the SURMĀ, united directly with the Meghnā. This is the course shown on the maps of Rennell's survey of 1785; and it was not till the beginning of the nineteenth century that, having raised its bed and lost its velocity, the river was no longer able to hold its own against the Meghnā, and, being forced to find another outlet for its banked-up waters, suddenly broke westwards and joined the Ganges near Goalundo. The old bed still retains its name, but has been steadily silting up, a process which was expedited by the great earthquake of 1897. The entire lower portion of the Brahmaputra may be described as an elaborate network of interlacing channels, many of which run dry in the cold season, but are filled to overflowing during the annual period of inundation. Numerous islands are formed by the river during its course, most of which are mere sandbanks deposited during one rainy season to be swept away by the inundation of the following year. The principal tributaries after leaving the Assam Valley are the TORSĀ and TĪSTA on its right bank; the latter joins it a few miles to the south-west of Chilmārī in Rangpur District.

Inundation. In agricultural and commercial utility, the Brahmaputra ranks next after the Ganges, and with the Indus, among the rivers of India. Unlike those two rivers, however, its waters are not largely utilized for artificial irrigation, nor are they confined within embankments. The natural overflow of the periodic inundation is sufficient to supply a soil which receives, in addition, a heavy rainfall; and this natural overflow is allowed to find its own lines of drainage. The plains of Eastern Bengal, watered by the Brahmaputra, yield abundant crops of rice, jute, and mustard, year after year, without undergoing any visible exhaustion.

Navigation. The Brahmaputra is navigable by steamers as high up as Dibrugarh, about 800 miles from the sea; and in its lower reaches its broad surface is covered with country craft of all sizes and rigs, down to dug-out canoes and timber-rafts. It is remarkable that there is comparatively little boat traffic in the Assam Valley itself. Goālpāra is the great emporium

of the boat trade, and Gauhāti is ordinarily the extreme point reached by boats of large burden. Nearly all the boats which resort to Goālpāra and Gauhāti come from Bengal or the United Provinces. Large cargo steamers with their attendant flats and a daily service of smaller and speedier passenger vessels ply on the Brahmaputra between Goalundo and Dibrugarh. The upward journey takes four and a half days to complete, the downward three. The principal places passed in the upward journey are: on the right bank, Sirājganj, a great emporium for jute and other agricultural produce, Dhubri, Tezpur, and Bishnāth; and on the left bank, Goālpāra, Gauhāti, Silghāt, and Dibrugarh. There are, however, eighteen other *ghāts* at which steamers call, the most important being Shikārighāt for Golāghāt, Kakilāmukh for Jorhāt, and Disāngmukh for Sibsāgar. The downward traffic chiefly consists of tea, coal, oilseeds, timber, hides, lac, and raw cotton from Assam; and jute, oilseeds, tobacco, rice, and other food-grains from Eastern Bengal.

Jamunā (2) (or Janai).—Name given to the lower section of the BRAHMAPUTRA, in Eastern Bengal, from its entrance into Bengal in 25° 24′ N. and 89° 41′ E., to its confluence with the Ganges in 23° 50′ N. and 89° 45′ E. Its course is almost due south, extending approximately for a length of 121 miles. This channel is of comparatively recent formation. When Major Rennell compiled his map of Bengal towards the close of the eighteenth century, the main stream of the Brahmaputra flowed in a south-easterly direction across the District of Mymensingh, past the civil station of Nasīrābād, to join the Meghnā just below Bhairab Bāzār. Some thirty years later, at the time of Buchanan-Hamilton's survey, this channel had already become of secondary importance; and at the present time, though it still bears the name of Brahmaputra, it has dwindled to a mere watercourse, navigable only during the rainy season. The Jamunā is now the main stream, and it extends from near Ghorāmāra in Rangpur District to the river mart of GOALUNDO in Farīdpur, situated at the junction with the main stream of the Ganges. Along the left or east bank stretches the District of Mymensingh, and on the right or west bank lie Rangpur, Bogra, and Pabna, all in the Rājshāhi Division. Although a modern creation, the Jamunā thus serves as an important administrative boundary. In the portion of its course which fringes Bogra District, it is locally known as the Daokobā or 'hatchet-cut,' perhaps to distinguish it from another Jamunā (1) in that District. It runs through a low-lying

country, formed out of its own loose alluvial sands, which afford the most favourable soil for jute cultivation. At some points its channel swells during the rainy season to a breadth of four or five miles, broken by frequent *chars* or sandbanks, which form, are washed away, and re-form year after year, according to the varying incidence of the current. The chief river mart on the Jamunā is SIRĀJGANJ in Pābna District. The Jamunā is navigable throughout its entire length, at all seasons of the year, by native craft of the largest burden, and also by the river steamers that ply to Assam.

Torsā.—River of Eastern Bengal. It rises in 27° 49′ N. and 89° 11′ E., below the Tang pass which divides the Chumbi valley from the Tibet uplands. After flowing under the name of the Amo-chu in a southerly and south-easterly direction through the Chumbi valley for 60 miles and through Bhutān, it enters Eastern Bengal in Jalpaigurī District, whence it passes into Cooch Behār. In this State the Torsā bifurcates. The western branch, called the Dharlā, is joined by the Jaldhākā, to which it gives its name, and eventually falls into the Brahmaputra in 25° 40′ N. and 89° 44′ E., after a course of 245 miles from its source. The eastern branch joins the Kāljāni, which in its turn flows into the Raidāk; this subsequently meets the Gangādhar, and the united river falls into the Brahmaputra by two mouths, the southern one being known as the Dudhkumār and the northern as the Sankos. The valley of the Amo-chu through Bhutān is being examined with a view to the construction of a road to connect the Chumbi valley directly with the plains.

Tīsta.—River of Bengal and Eastern Bengal. It rises beyond the frontier in the Chatāmu Lake, Tibet, in 28° 2′ N. and 88° 44′ E., though it is said to have another source below Kinchinjunga, in Sikkim, and, after traversing North Bengal in a generally south-east direction, falls into the Brahmaputra in Rangpur District, in 25° 24′ N. and 89° 42′ E. Its length within British territory is about 168 miles. The Sanskrit names for the Tīsta are *Trishnā* and *Trisrota*, the former implying 'thirst,' and the latter 'three springs.' The Kālīka Purāna gives the following account of its origin: The goddess Pārvatī, wife of Siva, was fighting with a demon (Asur), whose crime was that he would worship her husband and not herself. The monster, becoming thirsty during the combat, prayed to his patron deity for drink; and in consequence Siva caused the Tīsta river to flow from the breast of the goddess in three streams, and thus it has ever since continued to flow.

After draining Sikkim, the Tīsta forms the boundary between that State and Darjeeling District for some distance, till it receives the waters of the Great Rangīt, when it turns to the south, and, threading its way through the mountains of Darjeeling, finally debouches on the plains through a gorge known as the Sivok Golā Pass. In Darjeeling the principal tributaries of the Tīsta are: on its left bank, the Rangpo and the Rillī; and on its right, the Great Rangīt, the Rangjo, the Rayeng, and the Sivok. The Tīsta in this portion of its course is a deep mountain torrent not fordable at any time of the year. In the dry season its waters are sea-green, but after rain the admixture of calcareous detritus gives them a milky hue. The scenery along the river banks is here grand and beautiful. The lower slopes of the mountains are clothed with dense forest overhanging its waters, which now gurgle in their rocky bed and anon form deep still pools, while in the background rise in tier above tier the great snowy masses of the Himālayas. The Tīsta is not navigable by trading boats in its course through the hills, although canoes, roughly cut from the *sāl* timber on its banks, have been taken down the river from a point some 8 miles above the plains. Where it enters the plains it has a width of 700 or 800 yards, and becomes navigable by boats of 2 tons burden; but for some distance navigation is very difficult and precarious, owing to the rapids and the numerous rocks and boulders in the bed of the river. In the hills.

After a short course through the Darjeeling *tarai* the Tīsta passes into Jalpaigurī District at its north-western corner, and, flowing in a south-easterly direction, forms the boundary between the Western Duārs and the permanently settled portion of that District. Here its principal tributaries, all on the left or east bank, are the Lisu or Lish, the Ghish, and the Sāldānga. The Tīsta then traverses a small portion of the western extremity of Cooch Behār State, and flows across Rangpur District to join the Brahmaputra. In this District it receives numerous small tributary streams from the north-west and throws off many offshoots of more or less importance, the largest being the Ghāghāt, which probably marks an old bed of the main river. Another branch is the Manās, which rejoins the parent stream after a winding course of about 25 miles. In the lower part of its course the Tīsta has a fine channel, from 600 to 800 yards wide, with a large volume of water at all times of the year and a rapid current. Although it is capable of floating large trading boats of between 3 and 4 tons burden at all seasons, navigation becomes difficult in In the plains.

the cold season, owing to the shoals and quicksands which form at its junction with the Brahmaputra, and the small islands and sandbanks thrown up by the current. The lower reaches, from Kāpāsia to Nalganj Hāt, are called the Pāgla ('mad') river, owing to the frequent and violent changes in its course. Old channels abound, such as the Chotā ('small'), Burhī ('old'), and Marā ('dead') Tīsta, each of which must at one time have formed the main channel of the river, but which are now deserted and navigable only in the rains.

Changes of course. At the time of Major Rennell's survey (towards the close of the eighteenth century) the main stream of the Tīsta flowed south down the bed of the KARATOYĀ, instead of south-east as at present, and, joining the Atrai in Dinājpur, finally fell into the Ganges. But in the destructive floods of 1787, which form an epoch in the history of Rangpur, the main stream, swelled by incessant rains, suddenly forsook its channel and forced its way into the Ghāghāt. This latter river was unable to carry off such a vast accession to its waters; and the Tīsta spread itself over the District, causing widespread destruction to life and property, till it succeeded in cutting for itself a new and capacious channel by which it found its way to the Brahmaputra. In the early part of the nineteenth century the river again altered its course, forsaking a westward loop about 40 miles in length for a more direct course eastwards. It has since adhered to the course then formed, but with numerous encroachments on its banks, which have left in the west of Rangpur District a maze of old watercourses and stagnant marshes. These render it almost impossible to trace the former course of these rivers, and have caused at the same time great confusion in their nomenclature. In parts of its course the Karatoyā is still known as the Burhī ('old') Tīsta, and its broad sandy channel in many places indicates the route followed by the Tīsta according to Major Rennell's survey.

Karatoyā.—Old river of Eastern Bengal, which rises in the Baikuntpur jungle in the extreme north-west of Jalpaigurī District in 26° 51′ N. and 88° 28′ E., and meanders through Rangpur, until, after a course of 214 miles, it joins the Halhāliā, in the south of Bogra District, in 24° 38′ N. and 89° 29′ E. The united stream is known as the PHULJHUR, and it eventually finds its way into the JAMUNĀ (2). The Karatoyā bore in ancient times, as we learn from the Purānas, a high character for sanctity; and its mermaid goddess, whose image has been found among the ruins of MAHĀSTHĀN, was

widely worshipped, and this place is even now a favourite place of pilgrimage. The river is mentioned in the *Jogini Tantra* as the western boundary of the ancient kingdom of Kāmarūpa, which it separated from Pundra or Paundravardhana, the country of the Pods, whose capital was at Mahāsthān. It was along its right bank that Muhammad-i-Bakhtyār Khiljī, the Muhammadan conqueror of Bengal, marched upon his ill-fated invasion of Tibet in 1205; and in the narrative of that expedition the Karatoyā is described as being three times the width of the Ganges. It was no doubt the great river crossed by Hiuen Tsiang on his way to Kāmarūpa in the seventh century, and by Alā-ud-dīn Husain on his invasion of the same country in 1498.

The topography of the river is attended with numerous difficulties; changes of name are frequent, and its most recent bed, which ultimately joins the Atrai some 30 miles east of Pābna, is known indifferently as the Burhī ('old') Tīsta and the Karto or Karatoyā. It appears that at the end of the eighteenth century, when the Ganges and the Brahmaputra were still 150 miles apart, the TĪSTA united with the other Himālayan streams to form one great river. The elevated tract of stiff clay known as the BĀRIND, which spreads over a considerable part of the modern Districts of Rājshāhi, Dinājpur, Mālda, and Bogra, formed an obstacle which could not be so easily pierced as the more recent alluvium round it, and the outlet of the Himālayan streams was thus diverted to one side or the other. Sometimes when the trend of the rivers was eastwards, they flowed down the channel of the Karatoyā, which is shown in Van Den Broucke's map of Bengal (*circa* 1660) as flowing into the Ganges, and was, in fact, before the destructive floods of 1787, the main stream which brought down to the Ganges the great volume of Tīsta water. South of the Padmā there is now no trace of any river bearing this name; and, since the main stream of the Tīsta broke away to the east in 1787, the Karatoyā has gradually silted up, and it is at the present day a river of minor importance, little used for navigation.

Phuljhur.—River of Eastern Bengal, formed by the union of the Karatoyā and Halhāliā in Bogra District, in 24° 38′ N. and 89° 29′ E. It is subsequently joined by the Hurāsāgar, an offshoot of the JAMUNĀ (2); and the united stream, after being further augmented by the Baral and ICHĀMATĪ (1) near Berā in Pābna District, flows into the Jamunā (2).

Meghnā, The.—Great estuary of the Bengal delta, which

conveys to the sea the main volume of the waters of both the GANGES and the BRAHMAPUTRA, and thus forms the outlet for the drainage of half India. The name is properly applied only to the channel of the Old Brahmaputra, from Bhairab Bāzār downwards, after it has received the SURMĀ or Barāk from Sylhet, in 24° 2′ N. and 90° 59′ E.; but some maps mark the head-waters of the Meghnā as a small stream meandering through the centre of Mymensingh District, and joining the Brahmaputra near Bhairab Bāzār. At the present time the main streams of the Brahmaputra or JAMUNĀ (2), and of the Ganges, unite at Goalundo in Eastern Bengal, and, under the name of the PADMĀ, enter the estuary of the Meghnā opposite Chāndpur. The Meghnā proper runs almost due south, and forms the boundary between the Dacca Division to the west and the Chittagong Division. It nowhere flows between clearly defined banks; and it enters the sea in 22° 25′ N. and 91° 16′ E., after a course of 161 miles, by four principal mouths, enclosing the islands of DAKHIN SHĀHBĀZPUR, HĀTIA, and SANDWĪP.

Course.

Characteristics.

The general characteristics of the Meghnā are everywhere the same—a mighty rolling flood of great depth and velocity, sometimes split up into half a dozen channels by sandbanks of its own formation, sometimes spreading out into a wide expanse of water which the eye cannot see across. It is navigable by native boats of the largest burden, and also by river steamers all the year round; but navigation is difficult and sometimes dangerous. At low tide the bed is obstructed by shifting sandbanks and snags; and when the tide is high or the river is in flood, and especially when the monsoon is blowing, the surface often becomes too boisterous for heavy-laden river craft to ride in safety. The most favourable season for navigation is between November and February; but even in those months the native boatman fears to continue his voyage after nightfall. Alluvion and diluvion are constantly taking place, especially along the sea-board, where the antagonistic forces of river and ocean are ever engaged in the process of land-making. In Noākhāli District the mainland is steadily advancing seawards, while the islands fringing the mouth are annually being cut away and re-deposited in fresh shapes. For some years past the Meghnā has shown a tendency to shift its main channel gradually towards the west.

The bore.

The tidal phenomena of the Meghnā surpass those of any other Indian river. The regular rise of the tide is from 10 to 18 feet; and at spring-tides the sea rushes up in a single wave,

known as the 'bore.' On the Meghnā the bore is no mere spectacle for admiration, but a justly dreaded danger to boatmen. It may be witnessed in its greatest development at the time of the equinoxes, when navigation is sometimes impeded for days together, especially when the wind blows from the south. Before anything can be seen, a noise like thunder is heard seawards in the far distance. Then the tidal wave suddenly comes into view, advancing like a wall topped with foam, of the height of nearly 20 feet, and moving at the rate of 15 miles an hour. In a few minutes all is over, and the brimming river has at once changed from ebb to flood-tide.

Storm-waves.

A still greater danger than the bore is the storm-wave which occasionally sweeps up the Meghnā in the wake of cyclones. These storm-waves also are most liable to occur at the break of the monsoons in May and October. In the cyclone of May, 1867, the island of HĀTIA was entirely submerged by a wave which is estimated to have reached a height of 40 feet. But the greatest of these disasters within the memory of man occurred on the night of October 31, 1876. Towards evening of that day the wind had gradually risen till it blew a gale. Suddenly, at about midnight in some places, and nearer dawn in others, the roar of the bore was heard drowning the noises of the storm. Two and three waves came on in succession, flooding in one moment the entire country, and sweeping before them every living thing that was not lucky enough to reach a point of vantage. The destruction of human life on that memorable night is credibly estimated at 100,000 souls in the mainland portion of Noākhāli District and on the islands of Sandwīp and Hātia, or about 19 per cent. of the total population of these places. As usually happens in such cases, the mortality subsequently caused by cholera and a train of dependent diseases equalled that due directly to drowning.

[A full account of this calamity will be found in the *Report on the Vizagapatam and Backergunge Cyclones*, 1876.]

Ichāmatī (1).—River of Dacca District, Eastern Bengal. It flows through the south of the District, entering the Meghnā near Munshiganj. This even within historical times was a large stream, and has no less than five sacred bathing *ghāts* on its banks, at which the bathing ceremony takes place at the full moon in the month of Kārtik, when a similar ceremony is performed on the Karatoyā. This Ichāmatī seems to have been at one period, like the Ichāmatī of Nadiā and Jessore, a continuation of the North Bengal ICHĀMATĪ (1), from which it was cut off by the Dhaleswarī.

[For a discussion of the history of this river, see paragraph 22, *Report on the System of Agriculture and Agricultural Statistics of the Dacca District*, by A. C. Sen (1898).]

Fenny (vernacular *Pheni*).—River of Eastern Bengal. Rising in 23° 20′ N. and 91° 47′ E., in Hill Tippera, it flows south-west, marking the boundary between Hill Tippera and the Chittagong Hill Tracts, which it leaves at Rāmghar. Thence it flows west and south, dividing Chittagong from Noākhāli on the north, and ultimately falls into the Sandwīp channel, an arm of the Bay of Bengal, in 22° 50′ N. and 91° 27′ E., after a course of 72 miles. During its course through the hills it is of little use for navigation, as the banks are abrupt and covered with heavy grass jungle and bamboo coppices. The Fenny is of considerable depth during the rains, but is rendered dangerous by rapid currents, whirling eddies, and sharp turns; it is navigable by large boats throughout the year for a distance of 30 miles. It is joined on the right bank by the Muharī river; and the Little Fenny, which flows almost directly south from its source in Hill Tippera, falls into the Bay close to its mouth.

Karnaphuli.—River of Eastern Bengal. It rises in a lofty range of hills beyond the border of the Chittagong Hill Tracts, in 22° 53′ N. and 92° 27′ E., and, after following a generally south-westerly course of 121 miles, falls into the Bay of Bengal in 22° 12′ N. and 91° 47′ E., 12 miles below the town and port of Chittagong, which is situated on its right bank. As far up as Chittagong it is navigable by sea-going vessels, and by shallow-draught steamers as high as RĀNGĀMĀTI, the head-quarters of the Chittagong Hill Tracts. Large native boats go up as high as Kāsālang, while small craft ply 14 miles farther up to the Barkal rapids. In the Hill Tracts it is known as the Kynsa Khyoung. The chief tributaries are the Kāsālang, Chingri, Kāptai, and Rankhiang rivers in the Hill Tracts, and the Haldā in Chittagong District; the latter empties itself into the main river from the north, and is navigable by native boats for 24 miles throughout the year. Besides those already mentioned, the principal river-side villages are Chandraghonā and Rangonia. The Karnaphuli is largely used for floating cotton and forest produce from the Hill Tracts to Chittagong. The approaches to the mouth are lit by lighthouses at Kutubdiā and Norman's Point, and the channels are buoyed by the Port Commissioners of Chittagong.

Sangu.—River of Eastern Bengal. Rising in the range of hills which divides Arakan from the Chittagong Hill Tracts, in

21° 13′ N. and 92° 37′ E., it pursues a generally northerly course over a rocky bed to Bāndarban, from which place it takes a tortuous westerly direction through Chittagong District, and finally empties itself into the Bay of Bengal, in 22° 6′ N. and 91° 51′ E., after a course of 168 miles. The Sangu is tidal as far as Bāndarban, where its bed is sandy. Though shallow in ordinary times, during the rains it becomes deep, dangerous, and rapid. In its upper reaches it is called by the hillmen the Rigray Khyoung, and lower down the Sabāk Khyoung. It is navigable by large cargo boats for a distance of 30 miles throughout the year. The principal tributaries are the Dolu and Chāndkhāli, and the chief river-side village is Bāndarban.

Mātāmuhari.—River of Eastern Bengal. Rising in the range of mountains dividing Arakan from Chittagong, in 21° 14′ N. and 92° 36′ E., it flows north-west through the Chittagong Hill Tracts, and, turning westward as it leaves the hills, forms a broad delta as it pours into the Bay of Bengal, in 21° 45′ N. and 91° 57′ E., after a course of 96 miles. It was up the mouths of this delta that the storm-wave of October, 1897, rushed with tremendous violence, destroying every living creature within its range. The delta is of Sundarban character, consisting of groups of islets intersected by a network of tidal creeks and covered by mangrove jungle. This is rapidly being cleared; the lands are being embanked to exclude the salt water, and the creeks are silting up, and rich crops of rice are grown with but scanty tillage on these virgin soils built up by river silt. The principal place on its banks is Chakiriā, a good-sized village where there is a police station.

Dibāng.—A large river which rises in the Himālayas and, after flowing through the hills inhabited by the Mishmis, falls into the Brahmaputra near Sadiyā, in Assam. Its course has never been explored, owing to the difficulty of the country and the inhospitable character of the surrounding tribes. BOMJUR, the most advanced British outpost on the north-east frontier, is situated on the left bank of the river, near the mouth of the gorge through which it debouches on the plains.

Dihāng.—A large river which falls into the Brahmaputra a little to the west of Sadiyā in Assam. It flows through the hills inhabited by the Abors, and, owing to the difficulty of the country and the savage character of the inhabitants, its course has never been explored. The arguments in favour of the view that the Dihāng is identical with the Tsan-po of Tibet will be found in the article on the BRAHMAPUTRA.

Dihing, Noa.—River of Assam, which rises in the Singpho Hills, and flows west and then north, falling into the Brahmaputra east of Sadiyā, in Lakhimpur District. Through a large part of its course it passes through jungle land, though here and there the villages of Phakials, Singphos, and Assamese are to be found upon its banks. It is not largely used as a trade route; but boats of 4 tons burden can proceed as far as Ningru Samon's village in the dry season and beyond the Inner Line, which marks the effective limits of British jurisdiction, in the rains.

Dibru (or Sonāpurā).—River of Assam, which flows from east to west through the southern half of Lakhimpur District, nearly parallel to the Brahmaputra, for about 100 miles, and finally empties itself into that river just below the town of Dibrugarh, to which it has given its name. Of recent years the erosive action of this river has carried away valuable sites in the Dibrugarh bazar.

Dihing, Burhi.—River of Assam, which rises in the Pātkai range and flows in a westerly direction through Lakhimpur District, till it falls into the Brahmaputra, after a course of about 150 miles. Its principal tributaries are: on the right bank, the Digboi, Tipling, Tingrai, and Sesā; and on the left bank, the Tirāp and Namsang. After leaving the hills, it flows along the southern border of the District past the important settlement at Mārgheritā. It then winds through an outlying spur of the Assam Range, passes Jaipur, the site of an old cantonment, Nahorkhutiya, where it is crossed by the Assam-Bengal Railway, and Khowāng, and during the last part of its course forms the boundary between the Districts of Lakhimpur and Sibsāgar. Boats of 4 tons burden can go as far as Jaipur in the dry season, and above Mārgheritā in the rains. At this time of year small feeder-steamers occasionally come up to Jaipur, to carry away the tea manufactured on the estates which are situated in the neighbourhood. Below Jaipur the floods of the river do some damage, and steps are now being taken to repair an embankment constructed in the time of the Ahom Rājās. The spill water is, however, said to have a fertilizing effect, where the flood is not deep enough to injure the crops. The river is crossed by two railway bridges and five ferries, and on the eastern border of the District is connected by a channel with the NOA DIHING.

Disāng.—River of Assam, which rises in the hills inhabited by independent Nāgā tribes, flows from east to west through Sibsāgar District, and falls into the Brahmaputra about 8 miles

north-west of Sibsāgar town. Its approximate length is 140 miles; and the principal tributaries are: on the right bank, the Dimau and Diroi; and on the left, the Taokāk and Safrai. Boats of 4 tons burden can proceed up the Disāng as far as Dillighāt during the rains, and to Mohmārāghāt in the dry season. Feeder-steamers visit the latter place in the rains to carry away tea. In the lower part of its course the Disāng passes through cultivated land, where its floods cause considerable damage. An embankment, 19 miles in length, has been constructed along the left bank; but this does not afford sufficient protection, and an extension of the work is under consideration. The river is spanned by a bridge on the Assam-Bengal Railway near the Nāmrūp station, and is crossed by eleven ferries.

Dikho.—River of Assam, which rises in the hills inhabited by independent Nāgā tribes, and, after flowing north and west through Sibsāgar District, falls into the Brahmaputra. Its total length is about 120 miles, and most of its course through the plains lies in well-populated country, Sibsāgar and Nāzirā being the chief places on its banks. Boats of 4 tons burden can proceed up the river as far as Bihubar in the rains, and to Nāzirā, though with some little difficulty, in the cold season. During the rains a feeder-steamer plies between Nāzirā and the Brahmaputra two or three times a week. Prior to the construction of the Assam-Bengal Railway the Dikho was of considerable importance as a trade route, but some of the traffic has now been diverted to the railway. In the lower part of its course, floods do much damage, and protective embankments are now under construction. The river is spanned by a bridge on the Assam-Bengal Railway at Nāzirā, and crossed at eight points in the plains by ferries.

Jhānzi.—River of Assam, which rises near Mokokchūng in the Nāgā Hills, and, after a northerly course through Sibsāgar District, falls into the Brahmaputra. Its total length is 71 miles, and in its course through the plains it forms the boundary between the subdivisions of Sibsāgar and Jorhāt. In the dry season it becomes very shallow, but during the rains boats of 4 tons burden can proceed as far as the foot of the hills. Molasses, tobacco, salt, oil, and other articles of commerce are brought up the river in the rains and sold or exchanged for betel-nuts. Tea used formerly to be sent down-stream to Jhānzimukh, but most of it is now exported by rail. An area of about 30 square miles in the Simaluguri *mauza* is injured by the floods of the river, but there are some com-

pensating advantages, as the silt is said to have a fertilizing effect. The Jhānzi is crossed by a bridge on the Assam-Bengal Railway, and by four ferries.

Bhogdai.—River of Assam, which rises in the Nāgā Hills, and, after a north-westerly course through Sibsāgar District, falls into the Brahmaputra. In the upper part of its course it is styled the Disai; and the name Bhogdai is said to have first come into use at the end of the eighteenth century, in memory of a feast given to the labourers employed on the deepening of the lower channel. Mariāni, a considerable tea centre, and Jorhāt are situated on the left bank of the river, but there is not enough water in the channel to allow of its being used as a trade route. In the lower part of its course floods do some damage, and small protective works have been constructed. The silt is, however, said to have a fertilizing effect. The river is spanned by both railway and road bridges at Mariāni and Jorhāt, and is 81 miles in length.

Subansirī.—A great river in the north-east of Assam, which contributes to form the main stream of the Brahmaputra. Its source has never been explored; but it is supposed to rise far up among the mountains of Tibet, and to flow for a long distance in an easterly direction before it turns south to break through the northern mountain barrier of the Assam Valley. It enters Lakhimpur District from the Mīri Hills through a gorge of great beauty, and, still flowing south, divides the subdivision of North Lakhimpur into two almost equal portions. Before it reaches the Brahmaputra, it forms, together with the channel of the Luhit, the large island or *char* known as MĀJULI, and finally empties itself into the main stream, at the western end of Sibsāgar District. In the hills the bed of the river is greatly broken up by rocks and rapids; but it is navigable by small steamers in the plains. Boats of 4 tons burden can proceed to the frontier of Lakhimpur at all seasons of the year, and small steamers ply twice a week to Badati in the cold season, and twice a month to Bordeobām during the rains. Tea, rubber, mustard, potatoes, pulse, rice, canes, and timber are brought down the river, and gold can be washed from its sands, though all attempts to find the matrix of these deposits have hitherto proved fruitless. The river is too wide to bridge, except at an enormous cost, but it is crossed by eleven ferries.

Luhit.—A name which is sometimes applied to the BRAHMAPUTRA in part of its course through Assam, and more parti-

cularly to the channel which separates the Mājuli island from Lakhimpur District.

Dhansiri (1).—River of Assam, which rises in the Nāgā Hills and for a considerable distance forms the boundary between that District and Nowgong. At Dimāpur it enters Sibsāgar District and flows north-north-east to Golāghāt, where it turns to the west and falls into the Brahmaputra after a total course of 180 miles. The upper portion of the Dhansiri valley is a plain of considerable width, shut in between the Nāgā and the Mīkīr Hills, and covered with dense tree forest; and, except in the neighbourhood of Golāghāt, the greater part of the course lies through jungle land. Boats of 4 tons burden can proceed as far as Golāghāt in the dry season and Dimāpur in the rains; but, owing to the sparseness of population on its banks, the river, in spite of its size, is not largely used for trade. A small steamer runs from Dhansirimukh to Golāghāt every week during the rains, and collects tea from the gardens in the vicinity. Canoes are floated down the river and cotton is brought down by Nāgās in the cold season. The Assam-Bengal Railway crosses the Dhansiri at Bokājān, and there are five ferries at different parts of its course.

Bhareli.—River of Assam, which rises in the Himālayas in the territory occupied by the Akā and Daflā tribes, and enters Darrang District through a gorge of great beauty. After debouching on the plains it flows in an easterly direction round a range of low hills, and then pursues a tortuous course with a generally southern direction to the Brahmaputra, which it joins about 8 miles above Tezpur, after a total length of 160 miles. This, however, is a new channel; the old course ran from Bamgaon to a point about one mile east of Tezpur. The principal tributaries are: on the right bank, the upper Sonai and Mansiri; and on the left bank, the Diji, Namiri, upper Khari, Bar, and Dikrai. During the rains the Bhareli often overflows its banks, and the result is that for the greater part of its course through the plains it flows by tree forest or uncultivated land. There are no places of importance on its banks, and this fact, coupled with the swiftness of the current, renders it of little use as a trade route. A ferry on the trunk road crosses the river, which, during the rains, is about 250 yards in width at this point.

Dhansiri (2).—River of Assam, which rises in Towang, a province subject to Lhāsa, and enters Darrang District a little to the north of Udalguri. From there it flows south-south-east and falls into the Brahmaputra. At the place where the river

leaves the hills there is a deep pool called Bhairabkund, which is regarded with veneration by the people in the neighbourhood. In 1902 the river changed its course and entered the bed of the Rowta, and since that date its floods have done some damage in the Orāng *mauza*. For the greater part of its course it flows through jungle, and the total area of cultivated land affected is comparatively small. The river is not used either for irrigation or as a trade route, and its spill water is supposed to deposit sand, not silt.

Kalang.—An offshoot of the Brahmaputra in Assam, which leaves the main stream about 10 miles east of Silghāt, and, after a tortuous course of about 73 miles through Nowgong District, rejoins it on the confines of Kāmrūp. In the upper part of its course the Kalang receives the rivers which flow from the western watershed of the Mīkīr Hills, while the KAPILI, with its affluents the Jamunā and Doiāng, the Barpāni, and the UMIĀM bring to it the drainage of North Cāchār and of the Khāsi and Jaintiā Hills. The DIGRU, another considerable river, joins it near its western mouth. Through the greater portion of its length the banks of the Kalang are lined with villages, the most important of which are Kaliābar, Sāmaguri, Purānigudām, Nowgong, the District head-quarters, and Rahā; but at its western end the country through which it passes lies too low for cultivation, and the banks of the river are covered with dense jungle grass. A sandbank at its eastern end is a serious obstacle to traffic during the dry season; but in the rains a steamer of low draught plies between Nowgong and Silghāt, and carries away the tea collected at various centres. Country boats come up from Gauhāti at all seasons of the year for the transport of mustard, which is grown in large quantities in this portion of the Province. In the dry season the Kalang is fordable at Nowgong and Rahā, but after its junction with the Kapili there is always a considerable depth of water in the channel. Ferries have been established across the river at Kuwarital, Nowgong, Rahā, and Jāgi.

Kapili.—River of Assam, which rises on the northern slopes of the Jaintiā Hills, Eastern Bengal and Assam, and, after a course of 163 miles, falls into the KALANG at Jāgi, near the western end of Nowgong District. It receives the Doiāng, which carries off the whole of the drainage of the extreme north of Cāchār District, and, in addition to numerous other minor streams, the Jamunā, Barpāni, and Umiām or Kiling. A branch channel connects it with the Kalang at Rahā,

20 miles east of its main junction with that river. In the rainy season the Kapili is navigable by boats of 4 tons burden up to Panimur, the place at which it leaves the hills; but progress beyond this spot is checked by a barrier of rocks, over which the river is precipitated in a fine waterfall. During the dry season boats of this size cannot proceed farther than Kāmpur. In the hills the Kapili flows along a rocky channel; in the plains its course is through low-lying land, and its banks are for the most part covered with dense jungle grass. Most of the hill trade, which consists of cotton, lac, and *eri* silk, comes down the Kapili to Chāparmukh, and is dispatched thence by rail or country boat to Gauhāti. The Assam-Bengal Railway crosses the river on a brick bridge 500 yards in length, but this is largely in excess of the actual breadth of the channel at most seasons of the year. The principal places on its banks are Chāparmukh, Jamunāmukh, Khārikhāna, and Dharamtul. The floods of this river do considerable damage. Efforts have been made by the villagers to protect their lands, by constructing an embankment for about 7 miles along the southern bank from Deonarikoli to Magurgaon in the Sahari *mauza*.

Umiām.—River of Assam, which rises in the Khāsi Hills, a little to the north of Maoflang, and flows along a deep and precipitous gorge near the station of Shillong. At Barpāni it is spanned by a fine iron bridge on the cart-road between Shillong and Gauhāti, and from that point it flows north-east towards the Jaintiā Hills. For some distance it forms the boundary between the Khāsi and the Jaintiā Hills, and finally falls into the Kapili in Nowgong District, where it is known as the Kiling river, after a course of 81 miles.

Digru (or Sonāpuriā).—River of Assam, which rises in the Khāsi Hills, and flows north-eastwards into Kāmrūp District, emerging near the village of Sonāpur, whence it is sometimes locally known as the Sonāpuriā. It joins the Kalang river, just above the junction of the latter with the Brahmaputra, after a course of 64 miles. In the Khāsi Hills the Digru is known as the Um-thru.

Barnadī.—River of Assam, which rises in the Himālayas and enters the valley of the Brahmaputra at 26° 13′ N. and 91° 48′ E. From this point it once formed the boundary between the Districts of Kāmrūp and Darrang, but the river has so often changed its channel that its present course is no longer recognized as the boundary. Near the hills the Barnadī flows through forest and grass jungle, but farther south villages

appear on the banks. The most important places are Sonārikhāl, where two small fairs are held, and Magamuri market in the Tāmulpur *tahsīl*, which is situated about 4 miles from the Barnadī, but is a considerable centre of river-borne trade. A ferry plies throughout the year at Dumunichaki on the trunk road. The river is largely used as a trade route, and boats of 4 tons burden can proceed as far as Sonārikhāl throughout the year, and to Malmurāgaon in the rainy season. It has a total length of about 100 miles.

Kulsi.—River of Assam, which rises in the Khāsi Hills a little to the west of Shillong, and flows north and west for 120 miles to the Brahmaputra, which it joins near the western boundary of Kāmrūp District. The most important places on its banks are the Kulsi plantation and Chaygaon, a market in Kāmrūp. The upper part of its course lies in jungle, but in the central portion of Kāmrūp it passes numerous villages. It affords an outlet for the timber of the Kulsi plantation, and a certain amount of lac and cotton is brought down it from the hills. The trunk road crosses the Kulsi on two iron bridges at Kukurmārā and Chaygaon.

Manās.—River of Assam, which rises in the Bhutān hills and enters the valley of the Brahmaputra at the point where the Districts of Kāmrūp and Goālpāra meet. It once formed the boundary between these, but its channel is subject to frequent changes, and the greater part of its present course lies within Goālpāra. The principal tributaries are: on the right bank, the Makra, Dulani, Ai, Pomajan, Bhandura, and Koija; and on the left bank, the Chaulkhoā. The banks are, as a rule, covered with jungle; and the river is not much used as a trade route above its junction with the Chaulkhoā, though boats of 4 tons burden could probably go as far as Mowkhoā at all seasons of the year. Some damage is caused by the floods of an old channel known as the Mora Manās. The total length of the Manās is about 200 miles.

Ai.—River of Assam, which rises in Bhutān and has a tortuous easterly course through Goālpāra District, till it falls into the MANĀS. Its principal tributaries are the Buri Ai and Kānāmukra, both of which join it on the left bank. For the greater part of its course the Ai flows through jungle land; but it is used for the export of rice, mustard, thatching-grass, and timber, and is one of the routes by which articles of merchandise are conveyed into the interior. Boats of 4 tons burden can proceed as far as Kollagaon in the rainy and Chamugaon in the dry season. The river, which is 95 miles

in length, is nowhere bridged, but is crossed by ferries in four places.

Chāmpāmati.—River of Assam, which rises in Bhutān, and, after a tortuous southerly course through Goālpāra District, falls into the Brahmaputra after a length of 125 miles. It is of considerable use as a trade route, timber and rice being exported down its course, while the ordinary stores of the village trader are carried up it into the interior. During the rainy season boats of 4 tons burden can proceed as far as Garubhāsā, but in the dry season cannot get farther than Basugaon. The most important places on its banks are the markets at Garubhāsā and Chāpar Kāzipāra.

Saralbhāngā.—River of Assam, which rises in Bhutān and flows in a tortuous southerly course through Goālpāra District, till it falls into the Brahmaputra. Its principal tributary is the Gaurāng, which gives its name to the lower reaches of the river. Through the greater part of its course it flows through jungle land, but it is one of the recognized trade routes of the District by which timber and other forest produce are exported. During the rainy season boats of 4 tons burden can proceed as far as Pātgaon, north of the trunk road. The total length of the Saralbhāngā is about 81 miles.

Sankosh.—A large river which rises in Bhutān, and at the point where it debouches on the plains forms the boundary between the Districts of Goālpāra in Assam and Jalpaigurī in Eastern Bengal. It then flows along the western boundary of the Ripu Duār, and at Maktaigaon divides into two branches. The western arm retains the name of the original river, and, after flowing through Jalpaigurī and Cooch Behār, rejoins the eastern branch, which is called the Gangādhar, near Pātāmāri. The combined stream is then known as the Dudhkumār and falls into the Brahmaputra below Dhubri. For the greater part of its course it flows through jungle land; but it serves as a trade route, down which timber, thatching-grass, and other forest products are brought. The river is nowhere bridged in Goālpāra, but is crossed by ten ferries. The total length is about 200 miles.

Jinjirām.—River of Assam, which rises in the Urpad *bīl*, Goālpāra District, and flows through the southern portion of that District till it falls into the Brahmaputra, south of Mānikarchar, after a course of 120 miles. The most important places on its banks are Lakhipur, South Sālmāra, and Singimāri. Above Sālmāra the country is under water during the rains, and boats of 4 tons burden can proceed as far as Lakhipur.

In the dry season they cannot get beyond Singimāri. The river serves as a trade route for the southern portion of Goālpāra and the Gāro Hills.

Surmā River.—River of Assam, giving its name to the southern of the two valleys which originally constituted that Province. It rises on the southern slopes of the great mountain range which forms the northern boundary of Manipur. From there it flows for about 180 miles in a south-westerly direction till it reaches British territory at Tipaimukh. The upper part of its course, where it is known as the Barāk, lies through narrow valleys shut in on either side by hills that rise steeply from the river; and for a short distance it forms the boundary between the Nāgā Hills and Manipur. At Tipaimukh it turns sharply to the north, and for some distance divides Cāchār from Manipur in a line almost parallel to that taken by the river in its downward sweep. Near Lakhipur it turns west and enters Cāchār District, through which it flows with an extremely tortuous course till Sylhet is reached at Badarpur. A few miles west of that place the river divides into two branches. One stream, known as the Surmā, flows near the foot of the Khāsi and Jaintiā Hills past Sylhet, Chhātak, and Sunāmganj, and then turns again towards the south. The second branch is known at first as the Kusiyārā, but after its confluence with the Manu it again divides into two branches. The northern arm, called the Bibiyānā and afterwards the Kālni, rejoins the Surmā on the borders of the District near Ajmiriganj. The lower branch of the Barāk, resuming the name by which the river is known in Manipur and Cāchār, passes Nabiganj and Habiganj, and falls into the Surmā a little west of the latter place. The total length of the Surmā, measured along the northern arm of the river from its source to its confluence with the old stream of the Brahmaputra near Bhairab Bāzār, is about 560 miles. The Barāk receives numerous tributaries, the most important being on the north the Jiri, Jātingā, Bogāpāni, and Jādukāta, and on the south the Sonai, Dhaleswari, Singlā, Langai, Manu, and Khowai. In the upper part of its course it flows in a very deep channel, and, though rain in the hills often makes the river rise many feet in a few hours, it seldom overflows its banks. Lower down, where the bed of the river is not so deep, its waters sometimes spread over the country, and the floods of both the Surmā and the Kusiyārā are said to do some damage. In a low-lying District like Sylhet, which receives an enormous rainfall, it is practically

impossible to confine rivers within embankments; and the only works of this nature constructed on the Surmā are a small embankment along the north bank of the Kusiyārā from Fenchuganj to Mānikkonā, and a raised road from Noākhāli to Sylhet along the south bank of the Surmā. Prior to the construction of the Assam-Bengal Railway, the Surmā, with its numerous branches, was practically the only means of communication between Cāchār and Sylhet and the outside world; and it still takes a large share in the carrying trade of the country. During the rainy season, large steamers proceed up the Kusiyārā to Silchar, while steamers of lighter draught ply between Silchar and Lakhipur, and from Markhali near the western border of Sylhet past Sunāmganj and Chhātak to Sylhet town. In the cold season the large steamers go to Chhātak, and only small steamers can pass up the Kusiyārā to Silchar, as at that time of the year there is very little water in the river. The surface of all the numerous channels of this river is dotted with native boats of various shapes and sizes at all seasons of the year, and in that part of its course where it flows through or in the neighbourhood of the hills the scenery is extremely picturesque. Its importance as a trade route has caused many local marts to spring up on its banks. The most important of these are—on the river prior to its bifurcation, where it is known as the Barāk—Lakhipur, Silchar, Siyāltek, and Badarpur, where it is spanned by a magnificent railway bridge. On the Surmā, or northern branch, are Kānairghāt, Sylhet, Chhātak, Dwārā Bāzār, and Sunāmganj; while on the Kusiyārā are Karīmganj, Fenchuganj, Bālānganj, Manumukh, and Ajmiriganj. These are, however, only the more important centres of local trade. Throughout the whole of its course in the plains the banks of the various branches of the river are lined with villages, and there are numerous markets of less importance.

Jiri.—River of Assam, which rises on the southern slopes of the Barail, and, after a southerly course of 75 miles, falls into the Barāk or Surmā. For nearly the whole of its length it forms the boundary between Cāchār District and the State of Manipur; and it is crossed at Jirighāt by a ferry, which is maintained for the use of travellers along the Silchar-Manipur road. The greater part of its course lies through hilly country, and there is very little cultivated land in the vicinity. The only traffic brought down by the river consists of forest produce and tea from a garden situated at Jirighāt, about 5 miles above its confluence with the Barāk.

Sonai.—River of Assam, which rises in the Lushai Hills, and, after a tortuous northerly course of 60 miles through Cāchār District, falls into the Barāk. As far as Maniārkhāl it flows through jungle land, but in the lower part of its course its banks are fringed with villages. The most important of these are Palanghāt and Sonaimukh. Boats of 4 tons burden can proceed as far as Maniārkhāl during the rains, but the river is not largely used as a trade route.

Jātingā.—River of Assam, which rises near Hāflang in the North Cāchār hills, and flowing west and south falls into the Barāk. The hill section of the Assam-Bengal Railway has been taken up the valley of the Jātingā, the line running along the right bank of the river. In the plains the Jātingā passes near numerous tea gardens, and during the rainy season a small steamer goes up to Bālāchara near the foot of the hills. The river is nowhere bridged, but is crossed by five ferries, and is largely used as a trade route. Barkhalā Bāzār, Bālāchara, and Dāmcharā railway station are the most important places on its banks. Its total length is 36 miles.

Dhaleswari.—River of Assam, which rises in the Lushai Hills, where it is known by the name of Klangdong, and, after flowing north for 180 miles, falls into the Barāk at Siyāltek in Cāchār District. Changsil, one of the earliest British outposts in the Lushai Hills, is situated near its right bank; and the river is still used as a trade route as far as Sairang, a few miles from Aijal, the head-quarters of the Lushai Hills. At Pollycharā the Dhaleswari enters Cāchār District, and from this point flows through the fertile Hailākāndi valley. During the rains small feeder-steamers proceed up the river as far as Kukicharā twice a week, and in the dry season their place is taken by country boats. The river passes by numerous tea gardens and bazars, the most important mart being Siyāltek. The banks are steep and high, and the channel deep; but the river is liable to sudden freshes, which occasionally do some damage to villages in the neighbourhood, and small embankments have been erected on two or three gardens to prevent the spill water from injuring the tea gardens. The Dhaleswari used formerly to run along the west side of the valley and fall into the Barāk near Badarpur; but one of the Kachāri Rājās is said to have diverted its course close to Rangpur, and this new channel is known as the Kātākhāl. The old channel is now completely cut off from the upper waters of the Dhaleswari by an embankment, but the bed still contains a good deal of water, and between June and

September boats of 4 tons burden can proceed above Hailākāndī as far as Ainākhāl.

Singlā.—River of Assam, which rises in the Lushai Hills, and flowing northwards through the Karīmganj subdivision of Sylhet District falls into the Son lake 45 miles from its source. On emerging from this lake it is known as the Kachuyā, and joins the Kusiyārā, a branch of the Surmā, a little to the east of Karīmganj town. In the upper portion of its course it flows through jungle land, very sparsely peopled; but about 8 miles north of the Sylhet boundary it enters on an elevated tract, which has been planted with tea, and from there to its junction with the Kusiyārā its banks are fringed with villages and tea gardens. There being very little road traffic in Sylhet, the Singlā is largely used as a trade route for tea, forest produce, rice, and other products of the country. During the rains boats of 4 tons burden can proceed as far as Dullabcharā, but even in the dry season traffic is carried on in light vessels, which are towed up-stream.

Langai.—River of Assam, which rises in the hills to the south of Sylhet District, and flows north to within a few miles of Karīmganj town. Here it turns to the south-west and finally disappears in the Hākāluki *haor* (depression). During the rainy season it is connected with the Kusiyārā branch of the Surmā river, near Karīmganj, by a channel called the Natiākhāl. On entering Sylhet, the river flows through a 'reserved' forest, part of which has recently been thrown open to cultivation, and then through low hilly country, planted out with tea, and from this point its banks are fringed with tea gardens and villages. There is little wheeled traffic in Sylhet, and the Langai is largely used as a trade route for forest produce, tea, rice, cotton, mustard, mats, and other country products. During the rainy season boats of 4 tons burden can proceed as far as Hāthikirā tea estate; in the cold season traffic is carried on in light vessels. The most important places on the banks of the Langai are Pāthārkāndi, Nilām Bāzār, Lātu, and Jaldhub. Its total length is 73 miles.

Manu.—River of Assam, which rises in the State of Hill Tippera, and, after flowing in a tortuous north-westerly course through Sylhet District, falls into the Kusiyārā branch of the Surmā a little to the east of Bahādurpur. Almost the whole of its course in the plains lies through cultivated land, and it is largely used for the carriage of forest produce of all kinds, tea, rice, and oilseeds. Boats of 4 tons burden can proceed as far as the frontier of Hill Tippera in the rainy season, but

during the dry season traffic is carried on in vessels of lighter draught. The river passes a large number of local centres of trade, the most important of which are Lalbāg and Maulavi Bāzār. A little to the east of the latter place it receives a considerable tributary, the Dholai. The total length of the river is 135 miles.

Khowai.—River of Assam, which rises in the State of Hill Tippera, and, after flowing north-west through the Habiganj subdivision of Sylhet District, falls into the Barāk near Habiganj. The river passes by numerous local centres of trade, the most important of which are Muchikāndi and Habiganj, and is largely used as a trade route. During the rains boats of 4 tons burden can proceed as far as Bāllā Bāzār in Hill Tippera, and even in the dry season a vessel half that size can nearly reach the frontier of the District. The total length of the river is 84 miles.

Bogāpāni.—River of Assam, which rises on the east of the Shillong peak in the Khāsi Hills, and, after flowing west and south through the hills past Maoflang and Shellā, falls into the Surmā at Chhātak in Sylhet District. In the lower part of its course it is an important trade route for the carriage of limestone, oranges, bay-leaves, and other products of the hills. The total length of the Bogāpāni is 52 miles.

Jādukāta.—River of Assam, which rises in the Khāsi Hills, where it is known as the Kynchiang or Panātīrtha, and after flowing west and south debouches on the plains of Sylhet. Here it divides into two main channels, that to the east being known as the Pātlai and farther on as the Bolai, that to the west as the Piyain. Both of these branches fall into the Kāngsa, and the united stream ultimately joins the Surmā in Mymensingh District a little to the west of Habiganj. The river is largely used as a trade route, affording an outlet for the products of the Khāsi Hills. During the rainy season it is often unable to carry off the enormous quantities of water precipitated in its catchment area, and considerable damage is then done by floods. The total length of the river is 120 miles.

Someswari.—River in the Gāro Hills, Eastern Bengal and Assam. It rises to the north of Turā station, and flows east as far as Darangiri. Here it turns south and debouches on the plains of Mymensingh, through which it makes its way to the Kāngsa river, 88 miles from its source. It is navigable up-stream as far as Siju, where further progress is barred by rapids. Valuable outcrops of coal and lime have been

discovered in the Someswari valley, but owing to difficulties of transport they still remain unworked. In its course through the hills the river flows through gorges of great natural beauty, where precipitous cliffs are clothed with dense tropical vegetation.

Calcutta and Eastern Canals.—A system of navigable channels in the Twenty-four Parganas, Khulnā, Backergunge, and Farīdpur Districts of Bengal and Eastern Bengal, extending over a total length of 1,127 miles, of which about 47 miles, including Tolly's Nullah, are artificial canals, and the remainder are natural channels, mainly tidal creeks in the Sundarbans. These stretch eastwards from the Hooghly across the Ganges delta and afford means of intercommunication between the mouths of the latter river. The channels are under the supervision and control of Government, and tolls are charged on vessels using the artificial canals.

This is one of the most important systems of river canals in the world, judged by the volume of the traffic, which averages about 1,000,000 tons per annum, valued at nearly four millions sterling. The situation of Calcutta makes it the natural outlet for the Ganges valley; and this position has been enormously strengthened by the construction of railways, but other measures were necessary to enable it to tap the trade of the Brahmaputra valley and to focus the rich traffic of the eastern Districts. The intermediate country is a maze of tidal creeks, for the most part running north and south but connected here and there by cross-channels, wide near the sea-face but narrow and tortuous farther inland. These inland channels are constantly shifting as the deposit of silt raises their beds, while on the other hand the great estuaries near the sea-face are not navigable by country boats from June to October, owing to the strong sea-breezes which prevail during the south-west monsoon. This system of canals was devised, therefore, in order to allow country boats to pass from the eastern Districts to Calcutta by a direct inland route, and the problem has been to keep the natural cross-channels clear of silt, and to connect them with each other and with Calcutta by a system of artificial canals. The channels have been in use for many years; and it is along them that the rice, jute, and oilseeds of East and North Bengal, the tea of Assam and Cāchār, and the jungle produce of the Sundarbans pour into Calcutta, while they also carry the exports of salt, piece-goods, and kerosene oil from Calcutta to those Districts.

Before the opening of Tolly's Nullah, boats could approach

Calcutta only by a route close to the sea-face which brought them into the Hooghly by the Bārātala creek, 70 miles below Calcutta; and this route was not only circuitous but was impracticable for country boats during the rainy season. The pioneer of the system was Major Tolly, who in 1777 canalized an old bed of the Ganges, from its confluence with the Hooghly at Hastings, a little south of Fort William in Calcutta, south-eastwards to Gariyā (8 miles). From this point the canal (known as Tolly's Nullah) was carried east to meet the Bidyādharī river at Sāmukpotā, and thus gave access to an inner route which leads eastwards from Port Canning. In 1810 a further step was taken to facilitate access to Calcutta. An old channel through the Salt Water Lakes, east of the city, was improved and led westwards by what is now known as the Beliāghāta canal in the neighbourhood of Sealdah. Between 1826 and 1831 a new route was opened between Calcutta and the Jamunā river, following the same direct easterly course as the present Bhāngar canal, the object being to relieve the pressure on Tolly's Nullah; a number of tidal channels were utilized and connected by six cuts to form a continuous eastward route. The next step was to cut the Circular canal from Chitpur, parallel with the Circular Road, to meet the old Eastern canal at Beliāghāta, and this was completed in 1831. These canals were still choked by the increasing stream of traffic; and, in order to relieve them, the New Cut was opened in 1859, leading from Ultādānga, a point on the Circular canal 3 miles east of Chitpur, south-east to Dhāpa on the Beliāghāta canal. Finally the Bhāngar channel was canalized in 1899 for a length of 15 miles, thus completing the inner channel which had been commenced in 1831.

The objective of this system is Barisāl, the head-quarters of the great rice-growing District of Backergunge, situated 187 miles east of Calcutta. There are three alternative routes to Barisāl. The one generally followed is along the Bhāngar canal and Sibsā river to Khulnā, and thence by the Bhairab river to Pirojpur and Barisāl. An alternative route between Calcutta and Kālīganj on the Ichāmatī river follows Tolly's Nullah and the Bidyādharī river to Port Canning, and then strikes north-eastward. This is called the Outer route, and two similar alternative routes branch off southwards in Khulnā District. The main steamer route follows the Hooghly river as far as the Bārātala creek, and then turns east and north-east, meeting the two routes previously described at Pirojpur.

Included in this system is an important channel, known

as the Mādārīpur Bīl route, which connects the Kumār and Madhumatī rivers, and is used by jute-laden steamers during the rains; it shortens the journey between Khulnā and Mādārīpur by 89 miles. The construction of this route was commenced in 1900, and has since been completed. The channel is being deepened and widened for the purpose of allowing steamers and flats drawing 6 feet of water to use the route during the jute season; and the question of still further improving it, so as to make it navigable throughout the year, is under consideration. The net revenue of these canals in 1902-3 was 1·4 lakhs, being 2 per cent. on the capital outlay, and the estimated value of cargo carried during the year was 497 lakhs. In 1903-4 the receipts amounted to 4 lakhs and the net revenue was 1·3 lakhs; while the total capital outlay up to March 31, 1904, was 77·1 lakhs.

Banga (or Vanga, also called Samatata).—Ancient name for the deltaic tract of Bengal south of the Padmā river, and lying between the Bhāgīrathi and the old course of the Brahmaputra, corresponding with the southern portion of what is now known as Eastern Bengal. It was bounded on the north by the old kingdom of Pundra. The inhabitants are described in the *Raghubansa* as possessing many boats; and they are clearly the ancestors of the Chandāls, who at the present day inhabit this part of the country. This tract gave its name to the Province of Bengal.

Bārendra.—Ancient name given to the part of Eastern Bengal lying between the Mahānandā and Karatoyā rivers, and corresponding with the old kingdom of PUNDRA, and with the western portion of the modern Rājshāhi Division. The name is said to have been conferred by king Ballāl Sen in the eleventh century; and it still survives in the BĀRIND, an elevated tract on the confines of Dinājpur, Mālda, Rājshāhi, and Bogra Districts.

Prāgjyotisha.—Subsequently called Kāmarūpa, the name of an ancient kingdom which at the time of the Mahābhārata comprised Assam and a great part of Northern and Eastern Bengal. It stretched westwards as far as the Karatoyā river, and included a portion of Rangpur District. It was ruled by a succession of princes of Mongoloid stock.

Pundra.—Ancient kingdom in Eastern Bengal, which, according to Sir A. Cunningham, has given its name to Pābna District. It was bounded on the north-east by Prājyotisha or Kāmarūpa, on the west by the Mahānandā river, on the east by the Karatoyā, and on the south by the kingdom of Banga;

and it comprised parts of the modern Districts of Rangpur, Dinājpur, Purnea, Mālda, Rājshāhi, Bogra, and Pābna. The capital may have been at Mahāsthān or Pandua. This kingdom was in existence in the third century B.C., and Asoka's brother found shelter there in the guise of a Buddhist monk. It was still flourishing in the seventh century, when Hiuen Tsiang travelled in India; and it is mentioned as a powerful kingdom in the eighth century, and as a place of pilgrimage in the eleventh. King Ballāl Sen gave it the name of Bārendra, and it is the traditional home of the Pod caste.

Laur.—The name of an old Hindu kingdom, which at one time occupied the north-western portion of what is now the District of Sylhet, Eastern Bengal and Assam. Gor or Sylhet proper was conquered by the Muhammadans in A.D. 1384, but Laur retained its independence for another two hundred years. One of the Rājās, named Gobind, was summoned to Delhi and there embraced the Muhammadan faith; and his grandson, Abid Reza, abandoned Laur and built the town of Bāniyāchung at the beginning of the eighteenth century. Under the Mughal empire the Rājās of Laur were held responsible for the defence of the frontier, and their estates were not actually assessed to revenue till the middle of the eighteenth century. In 1765 Laur came under the civil administration of the British, with the rest of Bengal.

RĀJSHĀHI DIVISION

Rājshāhi Division.—Division or Commissionership of Eastern Bengal and Assam, extending from the Ganges to the Himālayas, and lying between 23° 49′ and 27° 0′ N. and 87° 46′ and 89° 53′ E. It is bounded on the east by Assam and the Dacca Division, and on the west by the sub-province of Bihār. The Division was formerly part of Bengal and then included the District of Darjeeling; but in 1905 it was transferred to Eastern Bengal and Assam with the addition of Mālda District, while Darjeeling was transferred to the Bhāgalpur Division of Bengal. The head-quarters of the Commissioner are at JALPAIGURĪ TOWN. The Division includes seven Districts with area, population, and revenue as shown below:—

District.	Area in square miles.	Population, 1901.	Current demand in 1903-4 for land revenue and cesses, in thousands of rupees.
Rājshāhi . . .	2,593	1,462,407	12,22
Dinājpur . . .	3,946	1,567,080	16,87
Jalpaigurī . . .	2,962	787,380	9,08
Mālda . . .	1,899	884,030	5,03
Rangpur . . .	3,493	2,154,181	13,16
Bogra . . .	1,359	854,533	6,05
Pābna . . .	1,839	1,420,461	5,21
Total	18,091	9,130,072	67,62

The population increased from 7,955,087 in 1872 to 8,280,893 in 1881 and 8,609,007 in 1891. The density of population is 505 persons per square mile, as compared with 474 for the whole of Bengal. Of the total, 62·4 per cent. were Muhammadans and 36·3 per cent. Hindus. The small remainder consists of Animists (103,633), Buddhists (6,352), and Christians (4,448, including 3,494 natives). About half the Hindus are the aboriginal Rājbansis and Koch, and the great majority of the local Muhammadans are the descendants of converts from these tribes.

The northern part of the Division consists of a strip of submontane country, in Jalpaigurī, running along the foot of the Himālayas. This tract contains large and valuable forests,

and the conditions are also very favourable to the growth of tea; the area under this crop in Jalpaigurī was 121 square miles in 1903, and the out-turn in that year amounted to nearly 37 million pounds. The remainder of the Division forms part of the great Gangetic plain. The surface consists of recent alluvium, except in portions of Mālda, Rājshāhi, Dinājpur, and Bogra, which belong to an older and more elevated alluvial formation known as the BĀRIND. More than half of the tobacco crop of Bengal is produced in Jalpaigurī and Rangpur, and jute is extensively cultivated in the south-east of the Division, while the rice of Dinājpur is well-known. The Division contains 18 towns and 31,303 villages. The largest towns are SIRĀJGANJ (population, 23,114) and RĀMPUR BOĀLIĀ (21,589). The chief place of commercial importance is the jute mart of Sirājganj. A considerable amount of trade also passes through SĀRA, where the northern section of the Eastern Bengal State Railway meets the Padmā, or main stream of the Ganges; SAIDPUR is the head-quarters of this section. GAUR and PANDUA were capitals of the early Muhammadan rulers of Bengal and contain ruins of great interest; DEVĪKOT, GHORĀGHĀT, MAHĀSTHĀN, and SHERPUR also possessed some importance under Muhammadan rule, and many traditions of earlier times are associated with the ruins at these places; but with these exceptions the Division contains few places of historical interest.

Boundaries, configuration, and river system.

Rājshāhi District (the 'royal territory').—District in the south-western corner of the Rājshāhi Division, Eastern Bengal and Assam, lying between 24° 7′ and 25° 3′ N. and 88° 18′ and 89° 21′ E., with an area of 2,593 square miles. It is bounded on the north by Dinājpur and Bogra Districts; on the east by Bogra and Pābna; on the south and south-west by the Padmā, or main stream of the Ganges, which separates it from Nadiā and Murshidābād; and on the west by Mālda.

The District is composed of three entirely distinct tracts. The north-western portion, bordering on Mālda and Dinājpur, is elevated and undulating, with a stiff red clay or quasi-laterite soil; where not cultivated, it is covered with brushwood, interspersed with large trees, the remains of an extensive forest. Along the bank of the Padmā or Ganges is a comparatively high and well-drained tract of sandy soil, while the central and eastern *thānas* are a swampy depression, waterlogged and abounding in marshes; the rivers that once drained this tract have been cut in half by the Padmā and their mouths have silted up.

With the exception of the PADMĀ, which forms the southern boundary of the District, and of the MAHĀNANDĀ, which runs for a short distance along its western border, the river system is a network of moribund streams and watercourses, some of which are connected with the Padmā and others with the Brahmaputra. The Baral is an offshoot of the Padmā, which eventually mingles its waters with those of the Atrai; its upper channels have silted up, and from December to June there is now scarcely any current. The Nārad was formerly another important branch of the Padmā, but its channel is now practically dry even during the rains. The chief representatives of the Brahmaputra system are the Atrai and the JAMUNĀ. The former is navigable throughout the year by small cargo boats, the latter only in the rains. Another river, whose lower reaches are usually passable by country boats, is the Bārānai, which flows in an easterly direction through the subdivision of Nator.

The District slopes slightly from west to east; its drainage is carried off not by rivers, but through a chain of marshes and swamps. The largest of these is the CHALAN BĪL, into which the overflow from all the others sooner or later finds its way, to be passed on eventually, through an outlet at its south-eastern corner, into the Brahmaputra.

Geology.

The greater part of the District is covered with recent alluvium, consisting of sandy clay and sand along the course of the rivers, and elsewhere of fine silt consolidating into clay. The Bārind, however, belongs to an older alluvial formation; it is composed of massive argillaceous beds of a rather pale reddish-brown hue, often weathering yellowish, in which are disseminated *kankar* and pisolitic ferruginous concretions.

Botany.

Where the ground is not occupied with the usual crops of North Bengal, it is covered with an abundant natural vegetation. Old river-beds, ponds and marshes, and streams with a sluggish current have a copious vegetation of *Vallisneria* and other plants. Land subject to inundation has usually a covering of *Tamarix* and reedy grasses, and where the ground is marshy *Rosa involucrata* is plentiful. Few trees are found on these inundated lands; the most plentiful and largest is the *hidjal* (*Barringtonia acutangula*). There are no forests; and even on the higher ground the trees are few and stunted, and the surface is covered by grasses, such as *Imperata arundinacea* and *Andropogon aciculatus*. Among trees the most conspicuous is the red cotton-tree or *semal* (*Bombax malabaricum*); the *sissū* (*Dalbergia Sissoo*) and the mango occur as planted

or sometimes self-sown species. The villages are generally buried in thickets of semi-spontaneous and more or less useful trees.

Fauna. Tigers are occasionally found in the Bārind and in the country south of the Chalan Bīl, but they are nowhere common. Leopards have greatly diminished in numbers in recent years. Fish abound in all the rivers, and the annual value of the Padmā fisheries alone has been estimated at 2 lakhs.

Temperature and rainfall. Mean temperature increases from 63° in January to 85° in April, May, and June. It is about 83° during the monsoon months, falling to 72° in November and 65° in December. The highest average maximum is 96° in April, and the lowest average minimum 51° in January. The annual rainfall averages 57 inches, of which 6·2 fall in May, 10·1 in June, 11·7 in July, 10·4 in August, and 10·4 in September.

Natural calamities. The earthquake of 1897 was very severely felt, especially in the east of the District. Only 15 deaths were reported, but great damage was caused to property, and the total loss to Government alone was estimated at 1½ lakhs. Earth fissures occurred in many places, the roads were badly cracked, and the crops damaged by surface subsidences.

History. Rājshāhi must originally have formed part of the old kingdom of PUNDRA or Paundravardhana, the country of the Pods, whose capital was at MAHĀSTHĀN. Under the Sen kings this was known as the Bārendra Bhūmi, a name which still survives in the Bārind tract already referred to. Rājshāhi presents an example of the process by which a native *zamīndāri* has been moulded into a British District. Early in the eighteenth century it was granted by the Muhammadans to Rāmjīban, the founder of the Nator family. In 1728 the *zamīndāri* of Rājshāhi extended from Bhāgalpur on the west to Dacca on the east, and included a large subdivision called Nij Chakla Rājshāhi, on the south bank of the Padmā, which stretched across Murshidābād and Nadiā as far as the frontiers of Bīrbhūm and Burdwān. Rājshāhi thus comprised an area of 13,000 square miles, and paid a revenue of 27 lakhs. Unfortunately, however, for the Nator family, the estate fell under the management of a woman, the celebrated Rānī Bhawāni, whose charitable grants of rent-free land permanently impoverished her ancestral possessions. After some years of direct management by Government officers, the Rānī's adopted son was permitted in 1790 to engage for the whole District at a permanent assessment of 23 lakhs; but the strict regulations

which were then introduced for the recovery of revenue arrears by sale of the defaulter's estate were constantly called into requisition against the Rājā, and parcel after parcel of his hereditary property was sold.

Meanwhile another chain of circumstances was tending to dissolve the integrity of the original District. At first an attempt was made to administer justice through a single Collector-Judge and Magistrate with two assistants, one stationed at Murādbāgh, near Murshidābād, and the other at the local capital of Nator. In 1793, however, a general re-distribution of Bengal into Districts was made, and the extensive tract lying south of the Padmā was taken from the parent District and divided among the adjoining jurisdictions of Murshidābād, Nadiā, and Jessore. The prevalence of crime in the remoter parts of the District rendered further reductions necessary; and in 1813 the present District of Mālda was constituted out of a neglected tract in the west, towards which Rājshāhi, Dinājpur, and Purnea each contributed their share; Bogra was formed in a similar manner in 1821, and Pābna in 1832; and thus Rājshāhi District assumed its present proportions.

The people.

The population of the present area increased from 1,423,592 in 1872 to 1,450,776 in 1881, but fell to 1,439,634 in 1891. It rose again in 1901 to 1,462,407, but the growth since 1872 is little more than 2 per cent. Rājshāhi is one of the most feverish Districts in Bengal, the unhealthiest portion being the central and eastern tract of waterlogged country which has already been described. This area is notoriously malarious, and the mortality from fever has consistently been among the highest recorded in Bengal. The prevailing disease is malarial fever; but cholera and dysentery also claim their victims.

The chief statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Rāmpur Boāliā	910	1	2,271	563,936	620	− 1·3	24,297
Naogaon . .	867	...	2,346	476,072	549	+ 12·1	20,211
Nator . .	816	1	1,727	422,399	518	− 4·8	17,732
District total	2,593	2	6,344	1,462,407	564	+ 1·6	62,240

The two towns are RĀMPUR BOĀLIĀ, the head-quarters, and

NATOR. The density would be far greater but for the fact that the District contains a large portion of the Bārind and numerous marshes and lakes, including the Chalan Bīl. In a belt of country running from north to south through the centre of the District the population is as dense as in almost any part of North Bengal. For the net increase the north of the District is entirely responsible. In the Bārind the population has increased since 1872 by 25·6 per cent., and in the *gānja*-growing *thānas* (Naogaon and Pānchupur) by 59·3 per cent., while in the decadent southern and central *thānas* there has been a decrease of 12·8 per cent. There has been an extension of immigration to the Bārind on the part of aboriginal Santāls, Mundās, and Oraons, who are encouraged to break down and clear the jungle by the *zamīndārs*. They are allowed to occupy waste land rent free for three or four years; and they then move on, leaving the fields they have brought under cultivation to be occupied by the less hardy local ryots, who would shrink from undertaking on their own account the irksome task of reclamation. There has been a considerable drift of population within the District from the unhealthy water-logged tract to the healthier and more prosperous *thānas* in the Naogaon subdivision. During the cold season numerous *pālki*-bearers, earth-workers, and field-labourers visit the District, and their presence at the time of the Census caused a large excess of males over females. The dialect known as Northern Bengali is the vernacular of the District. Muhammadans numbered 1,135,202, or 77·6 per cent. of the population, a proportion exceeded only in the neighbouring District of Bogra. Hindus (325,111) constitute the greater part of the remainder.

Castes and occupations.

The majority of the Muhammadans are Shaikhs, and there can be little doubt that the majority of these, together with the functional groups of Jolāhās (18,000) and Kulus (15,000), are descendants of converts from the Chandāl and Koch communities, which are, after the Kaibarttas (66,000), still the most numerous Hindu castes in the District. Of the total population, 73 per cent. are supported by agriculture, 12·7 per cent. by industry, 5·5 by unskilled labour, and only 0·5 and 1·5 per cent. by commerce and the professions respectively.

Christian missions.

A Presbyterian mission began work in 1862 and maintains a hospital and dispensary, an orphanage, and schools. The number of native Christians in 1901 was 309.

General agricultural conditions.

In the Bārind the only crop grown is winter rice; but the grey sandy soil of the Gangetic *thānas* supports a variety of crops, and the black loam which is found elsewhere is also

extremely fertile. In the two *thānas* of Naogaon and Pānchupur the land is somewhat higher and the drainage less obstructed than in the rest of the tract.

Chief agricultural statistics and principal crops.

The chief agricultural statistics for 1903–4 are as follows, areas being in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Rāmpur Boāliā	910	599	32
Naogaon	867	574	31
Nator	816	539	29
Total	2,593	1,712	92

Rice is everywhere the staple crop, being grown on 1,458 square miles, or more than four-fifths of the net cropped area. The early rice is sown broadcast on comparatively high lands at the time of the spring showers, and is reaped from July to September. The better kinds of winter rice are first sown in nurseries, whence the seedlings are afterwards transplanted to low lands; this crop is harvested in November and December. The coarser varieties of long-stemmed rice are sown in the beds of marshes and in very low-lying land; the stem grows with the rising of the water, and the grain reaches maturity about the end of December. The winter crop forms about 77 per cent. of the whole and the autumn crop about 18½ per cent.; while the spring crop grown on marsh lands contributes only a very small proportion of the total out-turn. Various pulses (215·6 square miles) and oilseeds (149 square miles) are raised, chiefly from the autumn rice-fields during the cold season. In addition, wheat (97 square miles), barley, oats, tobacco, sugar-cane, and maize are grown to some extent. Of the non-food crops, jute (131 square miles) is the most important. Betel-leaf is exported to North Bengal and Calcutta. Indigo and mulberry used to be grown largely; but the former has entirely disappeared, while the latter has for many years been declining, owing to the prevalence of silkworm epidemics. In order to revive the silk industry, a sericultural school has been opened at Rāmpur Boāliā, which supplies the Bengal Silk Committee with trained sericultural overseers and also trains rearers' sons in the microscopical examination of seed. The cultivation of *gānja* is carried on in a small tract of 76 square miles in the Naogaon and Pānchupur *thānas*, which supplies not merely the needs of the whole of Bengal, but also those of Assam and of a part of the United Provinces; some is also exported to Native States, and a small

quantity is shipped to London, whence it is passed on to the West Indies. The area cultivated varies from year to year, the average being 812 acres with a normal out-turn of 6,952 maunds. The maximum area which may be cultivated in any year is at present fixed by the Government of India at 976 acres, but this limit is subject to periodical revision.

Improvements in agricultural practice.

Little waste land now remains except in the Bārind, where it is rapidly being reclaimed. Scarcely any use is made of the Land Improvement and Agriculturists' Loans Acts, but in 1897 advances were taken to the extent of Rs. 19,000.

Cattle.

The local cattle are poor, probably on account of the deficiency of pasture and the absence of any attempts to improve the breed. Two very old fairs are held at KHETUR and MANDĀ. These are attended by from 25,000 to 28,000 persons, and take place in October and April respectively.

Irrigation.

Owing to the copious and regular rainfall and the annual rise of the rivers in the rainy season, artificial irrigation is rarely necessary, but it is occasionally practised on a small scale from the nearest tank or watercourse.

Arts and manufactures.

Cotton-weaving is a decadent industry, but it still gives employment to over 2,000 persons. Cotton cloths are printed and dyed at Rāmpur Boāliā. Copper, brass, and bell-metal utensils are produced at Kalam and Budhpāra in the Nator subdivision, and pottery for domestic use and brick rings for earthen wells are also manufactured in the former village. Reed mats are made at Naogaon for local consumption. Silk is the most important industry of Rājshāhi, as well as of the neighbouring Districts of Murshidābād and Mālda, and silk-spinning and weaving have been carried on in the District for centuries. The East India Company established a factory at Rājshāhi in the eighteenth century, and in 1832 the Company had two factories, each the seat of a Commercial Resident; the Residency at Rāmpur Boāliā was subsequently purchased by the firm of Messrs. Watson & Co. The out-turn of the several filatures was formerly as much as 400,000 lb. of raw silk, valued at 37 lakhs; but the average production for the three years ending 1899–1900 was only 96,684 lb., valued at 8·2 lakhs, and in 1903–4 the quantity manufactured fell to 67,790 lb. The bulk of the silk is exported to Europe, where it commands a ready sale at prices somewhat lower than silk from continental worms; it is used largely in the manufacture of silk hats. Some of the native spun silk is woven into a coarse cloth, called *matkā*, for local use. In 1901 there were three European silk factories—at Sardā, Kajlā, and Sarail—each possess-

ing subordinate filatures; and the industry supported over 41,000 persons.

Commerce. The bulk of the trade is with Calcutta, the chief exports being jute, rice, pulses, silk, and *gānja*, and the chief imports European piece-goods, salt, sugar, and kerosene oil. The principal marts are Sultānganj, GODĀGĀRI, RĀMPUR BOĀLIĀ, and Chārghāt on the Padmā; Changdhupail and Gurudāspur on the Baral; Kālīganj on one of the feeders of the Chalan Bīl; Prasādpur on the Atrai; and NAOGAON on the Jamunā. At Lakshmanhāti an extensive business is done in the sale and hire of sugar-cane mills and evaporating pans.

Railways and roads. The northern section of the Eastern Bengal State Railway intersects the District from north to south. Including 747 miles of village roads, the District contains (1904) 1,299 miles of roads, of which 42 miles are metalled. The most important are those leading from Rāmpur Boāliā northward to Naohāta via Bāya, eastward via Nator to Bogra and south-east to Pābna, north-westward to Mālda through Godāgāri, and northward from Godāgāri to Dinājpur.

Water communications. Road traffic is gradually increasing as the natural water-courses silt up; but the rivers still provide the chief means of communication, especially during the rains, when there are few villages in the north and east of the District which cannot be approached by water. The daily steamer services which ply from Goalundo up the Padmā stop at Chārghāt, Rāmpur Boāliā, and Godāgāri for passengers and cargo, and a branch service up the Mahānandā river connects Godāgāri with Mālda.

Famine. The famine of 1874 caused some distress, which was, however, relieved by the import of grain. Relief works were again necessary in 1897, but only on a small scale.

District subdivisions and staff. For general administrative purposes, the District is divided into three subdivisions, with head-quarters at RĀMPUR BOĀLIĀ, NAOGAON, and NATOR. Rāmpur Boāliā was formerly the head-quarters of the Division as well as of the District, but in 1888 the Commissioner's winter head-quarters were transferred to the more accessible station of Jalpaigurī. The staff subordinate to the District Magistrate-Collector consists of an Assistant Magistrate-Collector, five Deputy-Magistrate-Collectors, two of whom are in charge of the subdivisions of Naogaon and Nator, the others being stationed at head-quarters, and four Sub-Deputy-Magistrate-Collectors, two of whom are stationed at Nator and two at Naogaon.

For civil work there are the courts of the District and

Civil and criminal justice.

Sessions Judge, who is also Judge of Mālda, of a Sub-Judge, and of four Munsifs, two being stationed at Nator and one at each of the other subdivisional head-quarters. The criminal courts include those of the Sessions Judge, District Magistrate, and the Assistant, Deputy, and Sub-Deputy Magistrates. The majority of the cases before the courts arise out of disputes about land.

Land revenue.

An account of the land revenue history has been included in the paragraph on the general history of the District. The current demand in 1903–4 was 10·26 lakhs, payable by 1,639 estates, of which 1,592, with a demand of 10·18 lakhs, were permanently settled, 20 small estates were temporarily settled, and 27 were managed direct by Government. The average revenue per cultivated acre is R. 0–13–11, or rather above the average of R. 0–13–2 per acre for the whole of Bengal. The revenue represents about 28 per cent. of the rental of the District. Rent rates vary from Rs. 3 to Rs. 9 per acre, the higher figure being paid for mulberry, sugar-cane, *gānja*, and garden lands.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	9,25	9,04	10,26	10,12
Total revenue . .	12,96	13,72	16,22	16,46

Local and municipal government.

Outside the municipalities of RĀMPUR BOĀLIĀ and NATOR, local affairs are managed by the District board, with a subordinate local board in each subdivision. In 1903–4 the income of the District board was Rs. 1,71,000, of which Rs. 90,000 was derived from rates; and the expenditure was Rs. 1,64,000, including Rs. 79,000 spent on public works and Rs. 44,000 on education.

Police and jails.

The District contains 20 *thānas* or police stations and 2 outposts. The force under the District Superintendent consisted in 1903 of 3 inspectors, 31 sub-inspectors, 30 head constables, and 402 constables. In addition, there was a rural police force of 319 *daffadārs* and 3,444 *chaukīdārs*. A Central jail at Rāmpur Boāliā has accommodation for 872 prisoners, and sub-jails at the other subdivisions for 30.

Education.

Rājshāhi is backward in educational matters, only 4·3 per cent. of the population (8 males and 0·4 females) being able to read and write in 1901. The total number of pupils under instruction increased from 14,227 in 1892–3 to 21,423 in

1900–1, while 22,581 boys and 1,481 girls were at school in 1903–4, being respectively 20·2 and 1·3 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 719, including an Arts college, 35 secondary schools, and 664 primary schools. The expenditure on education was 1·73 lakhs, of which Rs. 19,000 was met from Provincial funds, Rs. 41,000 from District funds, Rs. 1,300 from municipal funds, and Rs. 70,000 from fees. The chief educational institutions are at Rāmpur Boāliā, including the Rājshāhi College and the sericultural school.

Medica[l.] In 1903 the District contained 17 dispensaries, of which 4 had accommodation for 64 in-patients. At these the cases of 103,000 out-patients and 748 in-patients were treated during the year, and 3,038 operations were performed. The expenditure was Rs. 40,000, of which Rs. 1,500 was met from Government contributions, Rs. 14,000 from Local and Rs. 7,000 from municipal funds, and Rs. 12,000 from subscriptions.

Vaccin[a]tion. Vaccination is compulsory only within the municipalities of Rāmpur Boāliā and Nator. The number of persons successfully vaccinated in 1903–4 was 52,000, representing 36 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. viii (1877).]

Rāmpur Boāliā Subdivision.—Head-quarters subdivision of Rājshāhi District, Eastern Bengal and Assam, lying between 24° 7′ and 24° 43′ N. and 88° 18′ and 88° 58′ E., with an area of 910 square miles. The subdivision consists of three portions. To the north-west is the Bārind, an elevated and undulating tract; along the Padmā, which bounds it on the south, is a comparatively high and well-drained strip of sandy soil; and to the east the land is swampy and waterlogged. The population in 1901 was 563,936, compared with 571,578 in 1891, the density being 620 persons per square mile. It contains one town, Rāmpur Boāliā (population, 21,589), the head-quarters; and 2,271 villages. The chief centres of commerce are Godāgāri, Rāmpur Boāliā, and Chārghāt on the Padmā, which conduct a thriving river trade. A large annual fair is held at Khetur.

Naogaon Subdivision.—Northern subdivision of Rājshāhi District, Eastern Bengal and Assam, lying between 24° 32′ and 25° 3′ N. and 88° 23′ and 89° 10′ E., with an area of 867 square miles. The subdivision, which is intersected by the Atrai, contains much swampy and waterlogged land to the east of that river; but to the north-west the country forms

part of the Bārind, an elevated and undulating tract consisting of a stiff red clay covered with brushwood. The population in 1901 was 476,072, compared with 424,545 in 1891, the density being 549 persons per square mile. It contains 2,346 villages, one of which, NAOGAON (population, 4,092), is the head-quarters; but no town. It is best known on account of the *gānja* produced in the Naogaon and Pānchupur *thānas*, which supply the whole of Bengal and Assam and part of the United Provinces. A large fair is held annually at MANDĀ.

Nator Subdivision.—Eastern subdivision of Rājshāhi District, Eastern Bengal and Assam, lying between 24° 7′ and 24° 48′ N. and 88° 51′ and 89° 21′ E., with an area of 816 square miles. The population in 1901 was 422,399, compared with 443,511 in 1891, the density being 518 persons per square mile. It contains one town, NATOR (population, 8,654), the head-quarters; and 1,727 villages. With the exception of the Lālpur *thāna*, situated on the Padmā, most of the subdivision is a swampy depression, waterlogged and abounding in marshes, the largest of which is the great CHALAN BĪL.

Godāgāri.—Village in the head-quarters subdivision of Rājshāhi District, Eastern Bengal and Assam, situated in 24° 28′ N. and 88° 19′ E., in the extreme west of the District, near the junction of the Mahānandā with the Padmā. Population (1901), 235. It possesses an important river trade extending as far as the United Provinces, and is a station on the steamer route from Dāmukdiā to Mālda. A scheme is under consideration to connect Godāgāri by railway with KATIHĀR.

Khetur.—Village in the head-quarters subdivision of Rājshāhi District, Eastern Bengal and Assam, situated in 24° 24′ N. and 88° 23′ E. Population (1901), 440. It enjoys a high repute for sanctity from its having been visited by Chaitanya, the great Hindu religious reformer of the sixteenth century, in whose honour a temple has been erected in the village. A religious fair held annually in October is attended by 25,000 persons.

Mandā.—Village in the Naogaon subdivision of Rājshāhi District, Eastern Bengal and Assam, situated in 24° 46′ N. and 88° 39′ E., on the west bank of the Atrai river. Population (1901), 356. It is the site of an annual fair held in March or April on the occasion of the Hindu festival, Srī Rām Nabamī, in honour of Rām (the seventh incarnation of Vishnu). The fair is attended by about 25,000 people from all parts of the District.

Naogaon Village.—Head-quarters of the subdivision of

the same name in Rājshāhi District, Eastern Bengal and Assam, situated in 24° 48′ N. and 88° 57′ E., on the west bank of the Jamunā river. Population (1901), 4,092. The village derives importance from being the centre of the *gānja* cultivation, and nearly a lakh has been spent on the *gānja* offices and storehouses. It contains the usual subdivisional offices; the sub-jail has accommodation for 18 prisoners.

Nator Town.—Head-quarters of the subdivision of the same name in Rājshāhi District, Eastern Bengal and Assam, situated in 24° 26′ N. and 89° 1′ E., on the north bank of the Nārad river, on the northern section of the Eastern Bengal State Railway, and on the main road from Rāmpur Boāliā to Bogra. Population (1901), 8,654. It was formerly the capital of the District; but owing to its unhealthiness (the town being built on low marsh-land reclaimed from the river), the head-quarters were transferred to Rāmpur Boāliā. Nator is a compact town, clinging close round the palace of the Nator Rājās. This family rose into power in the early part of the eighteenth century, and gradually obtained possession of most of the District; but it has since greatly declined. Nator was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 14,200, and the expenditure Rs. 13,500. In 1903–4 the income was Rs. 15,600, including Rs. 5,700 derived from a tax on persons (or property tax), Rs. 3,300 from a conservancy rate, and Rs. 3,000 from a tax on animals and vehicles; and the expenditure was Rs. 13,400. Nator contains the usual subdivisional offices; the sub-jail has accommodation for 12 prisoners.

Rāmpur Boāliā Town.—Head-quarters of Rājshāhi District, Eastern Bengal and Assam, situated in 24° 22′ N. and 88° 36′ E., on the north bank of the Padmā. Population (1901), 21,589, of whom 51 per cent. were Hindus, 48 per cent. Musalmāns, and 1 per cent. Christians. Rāmpur Boāliā has long been an important centre of the silk industry. It was first selected by the Dutch in the early part of the eighteenth century for the establishment of a factory, and was subsequently for many years the head-quarters of an English Commercial Residency. The seat of administration was transferred here from Nator in 1825. The town is of modern growth, and is built for the most part on river alluvium. It was formerly liable to encroachment by the Padmā and suffered severely from inundations, from which it is now protected by an embankment running along the river bank for 6 miles. In recent years the river has receded from the town, and the considerable

trade which it formerly enjoyed has declined; it has also suffered from the decay of the Bengal indigo industry. Rāmpur Boāliā was constituted a municipality in 1876. The municipal income during the decade ending 1901-2 averaged Rs. 37,000, and the expenditure Rs. 31,000. In 1903-4 the income was Rs. 53,000, of which Rs. 12,000 was derived from a tax on persons (or property tax), Rs. 6,000 from a conservancy rate, and Rs. 7,000 from a tax on vehicles, while Rs. 13,000 represented a grant received for medical purposes. The expenditure in the same year was Rs. 50,000. There is a Central jail, with accommodation for 872 prisoners; the chief jail industries are the manufacture of mustard and castor oils, twine, *darīs*, and utensils of wood and bamboo. The Rājshāhi College is a first-class Government college teaching up to the M.A. standard, with a collegiate school, Oriental classes, and a law department. It possesses endowments to the extent of Rs. 10,000, in addition to which the Oriental classes are maintained from the Mohsin fund. Boarding-houses attached to the college accommodate 150 students. A sericultural school was opened in 1897, where practical training is given to sericultural overseers and the sons of silkworm-rearers.

Boundaries, configuration, and river system.

Dinājpur District.—District in the Rājshāhi Division of Eastern Bengal and Assam, lying between 24° 55′ and 26° 23′ N. and 88° 2′ and 89° 19′ E., with an area of 3,946 square miles. It is bounded on the north-east by Jalpaigurī; on the north-west and west by Purnea; on the east by Rangpur; on the south-east by Bogra; on the south by Rājshāhi; and on the south-west by Mālda.

The country is generally flat, but in the south of the District the elevated tract known as the Bārind rises in low undulating ridges, some of which attain a height of 100 feet. Similar low hills occur also in the north-west along the Kulik river. The country is intersected by numerous rivers, which run during the cold season through comparatively deep and narrow channels, and are at this time easily fordable, but in the rains overflow their banks in a succession of long, narrow marshes. The uplands of the Bārind form a watershed, draining on the west into the MAHĀNANDĀ and on the east into the old Tīsta river. The Nāgar is a tributary of the Mahānandā, forming the boundary between Dinājpur and Purnea. The river bed is rocky in the upper reaches, but becomes sandy lower down, where it is navigable by large boats during the rains; its principal tributary is the Kulik. Other important tributaries of the Mahānandā are the Tāngan and Pūrnabhabā, which

join it in Mālda District; they run through the clay country along shallow valleys bordered by elevated clay ridges, and are navigable by large boats during the rains. The various channels of the Tīsta still flowing through the District are now known as the Atrai, Jamunā, and Karatoyā. The Atrai enters Dinājpur on the north-east from Rangpur, and flowing due south passes into Rājshāhi; it finally empties itself into the Padmā in Pābna District, where it is known as the Baral. The Karatoyā forms the eastern boundary of the District for 50 miles.

Geology. The greater part of the District is covered by recent alluvial deposits, consisting of sandy clay and sand along the course of the rivers, and fine silt consolidating into clay in the other parts of the plain. The Bārind, which belongs to an older alluvial formation, is composed of argillaceous beds of a rather pale reddish-brown hue, often weathering yellowish, in which occur *kankar* and pisolitic ferruginous concretions, some found near Dinājpur town being of the size of pigeons' eggs.

Botany. Where the ground is not occupied by the usual crops of North Bengal, it is covered with an abundant natural vegetation. Old river-beds, ponds and marshes, and streams with a sluggish current have a copious growth of *Vallisneria* and other plants. Land subject to inundation has usually a covering of *Tamarix* and reedy grasses, and in some parts where the ground is marshy *Rosa involucrata* is plentiful. Few trees grow on these inundated lands; the most plentiful and largest is the *hidjal* (*Barringtonia acutangula*). The District contains no forests, but a considerable portion is covered with scrub jungle, and there are several coppices of *sāl* (*Shorea robusta*); the trees are, however, rather stunted as a rule. A great part of the surface is occupied by grasses, the commonest being *Imperata arundinacea* and *Andropogon aciculatus*. The bamboo, of which several varieties are found, is common throughout the District. The most conspicuous trees are the red cotton-tree (*Bombax malabaricum*), jack-fruit tree (*Artocarpus integrifolia*), *Eugenia Jambolana*, *Zizyphus Jujuba*, and the mango, which are sometimes planted and sometimes self-sown.

Fauna. Leopards are still very common; and wild hog abound in the tracts covered with scrub jungle and do much damage to the crops. The District was once famous for its fish; but this is no longer the case, and the local supply has to be supplemented by the importation of large quantities from Sāra Ghāt and Manihārī Ghāt on the Ganges, as well as from Purnea.

Snakes are very common, and numerous deaths from snake-bite occur during the rains.

Temperature and rainfall.

There are no extremes of temperature. During the cold season westerly or north-westerly winds blow from the Himālayas, and the temperature is comparatively low, the mean being 66°. In January the mean minimum temperature is 49°. After the southerly winds commence in March, the temperature rises rapidly, the mean being 75° in March and 83° in April, but the highest point (84°) is not reached till June. The highest mean maximum is 95° in April. Rainfall commences early and is exceptionally heavy after the commencement of the monsoon; the average fall is 12·9 inches in June, 13·9 in July, 11·6 in August, and 11·4 in September, more than three-quarters of the annual fall of 63 inches occurring during these months. The earthquake of 1897 was severely felt throughout the District and caused great injury to property.

History and archaeology.

Dinājpur is famous for its antiquities[1]. In addition to the fine eighteenth-century temples at KĀNTANAGAR and Gopālganj, many old tanks and ruined buildings are connected by legend with a remote past. Tarpan Ghāt, in the Nawābganj *thāna*, is still pointed out as the place where the sage Vālmīkī, the author of the Rāmāyana, bathed and performed religious rites (*tarpan*); and a mound of bricks in the vicinity, known as Sītākot, is the spot assigned by tradition as the home of Sītā, Rāma's exiled queen. Like other tracts, the country is popularly identified with the *Matsyadesa* of the Mahābhārata, under the rule of Virāt, at whose court the Pāndavas took shelter during their exile; some ruins near GHORĀGHĀT are still known as 'Virāt's cow-house.' It subsequently formed part of Bārendra and later of the kingdom of Paundravardhana, the country of the Pods, whose capital was at MAHĀSTHĀN.

Dinājpur came into the possession of the Pāl kings in the ninth century, and the stone pillars and copperplates which have been found here afford numerous traces of this dynasty. The name of Mahī Pāl, the most powerful of the Pāl kings, is still remembered by the people, a large tank being called after him. The stone monolith in the Dhibar *dīghi*, the Budal pillar, and other Buddhist remains probably date from this period. At the beginning of the fifteenth century Rājā Ganesh, a 'Hindu and Hākim of Dynwāj,' who subsequently became a convert to Islām and founded the Dinājpur Rāj, rose to power, and, defeating the Muhammadan king of Bengal,

[1] *Reports, Archaeological Survey of India*, vol. xv; *Epigraphia Indica*, vol. ii.

seized the throne in 1404. He reigned for ten years, and was succeeded by his son, Jalāl-ud-dīn Muhammad Shāh, who, with his son Ahmad Shāh, occupied the throne until 1442. Devīkot and Ghorāghāt were important military stations in the time of the Mughals.

When the District first came under British rule, it was notorious for the lawlessness of its inhabitants; and in order to enable the administration to cope successfully with the dacoits who infested it, its limits were gradually circumscribed, and large portions of the modern Districts of Mālda and Bogra were carved out of it. It was not, however, until recently that it was reduced to its present proportions by the transfer in 1896 of the Mahādebpur *thāna* to Rājshāhi.

The population of the present area increased from 1,430,096 in 1872 to 1,442,518 in 1881, 1,482,570 in 1891, and 1,567,080 in 1901. Dinājpur has long been notorious for its unhealthiness, which was the subject of an official inquiry in 1878, and the country-side is covered with the deserted sites of once flourishing places which have since relapsed into jungle. The birth-rate is considerably higher than the mean for Bengal, but the population is kept down by the havoc caused by the local malarial fevers, which in 1901 caused a mortality of 35·27 per thousand. In that year Dinājpur had the heaviest fever death-rate in Bengal, while in each year of the preceding decade it was one of the six Districts with the highest recorded mortality from this cause. The people.

The chief statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Dinājpur	1,598	1	3,220	637,364	399	+ 4·0	*
Thākurgaon	1,171	...	1,990	543,086	464	+ 2·2	27,493
Bālurghāt	1,177	...	2,631	386,630	328	+ 14·2	*
District total	3,946	1	7,841	1,567,080	397	+ 5·7	83,612

* Separate figures for the Dinājpur and Bālurghāt subdivisions are not available. The total number in both subdivisions was 56,119.

The only town is DINĀJPUR, the head-quarters. The density exceeds 500 persons per square mile in the Dinājpur (531) and Thākurgaon (516) *thānas*, while in the Parsā *thāna* it falls to 272. The increase of 5·7 per cent. during the last decade was almost entirely due to immigration from other Districts to the Bārind. There is also much immigration of a temporary

character from Bihār and the United Provinces. As usual in North Bengal where the Rājbansi element predominates, there is a large preponderance of males over females. The Northern dialect of Bengali is the vernacular. Musalmāns, with 776,737 persons, constitute nearly half the population, and Hindus, with 726,429 persons, 46 per cent.; the remainder consists chiefly of animistic immigrants from the Santāl Parganas.

Castes and occupations.

The Rājbansis or Koch, who number nearly half a million or a third of the entire District population, are doubtless the descendants of the aboriginal inhabitants of Northern Bengal, and the Muhammadans are probably derived mainly from the same stock. The Santāls, who have been steadily pushing their way northward since the beginning of the nineteenth century, and who are reclaiming the Bārind, now number 74,000. No less than 87 per cent. of the population are supported by agriculture, a ratio which is exceeded (in Bengal) only in the neighbouring Districts of Jalpaigurī and Bogra; the proportions of those dependent on industries (5 per cent.), commerce (0·3 per cent.), and the professions (0·8 per cent.), are less than half the average for the whole of Bengal.

Christian missions.

A Baptist mission was founded in Dinājpur in 1804, but it has gained very few converts. The total number of native Christians in 1901 was only 727.

General agricultural conditions.

The soil in the north of the District is a light ash-coloured sandy loam, which is very retentive of moisture and generally produces two crops. Towards the south it changes into the stiff red clay of the Bārind, which ordinarily bears but a single crop.

Chief agricultural statistics and principal crops.

The chief agricultural statistics for 1903–4 are as follows, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Dinājpur	1,598	858	305
Thākurgaon	1,171	594	192
Bālurghāt	1,177	631	222
Total	3,946	2,083	719

Dinājpur is one of the chief rice-growing Districts in Eastern Bengal, and 1,797 square miles, or 86 per cent. of the net cropped area, are under this staple. The winter rice is by far the most important crop, covering nearly 77 per cent. of the net cropped area. It is sown in marshy land in June or July, transplanted, and finally reaped in December. Early

rice is sown broadcast in May and reaped in August or September, but this and the spring crops are comparatively unimportant. Rape and mustard are largely grown, and jute has increased sixfold in the last seventy years; it now covers 94 square miles, or 4½ per cent. of the cropped area. The cultivation of sugar-cane has declined, but it still occupies about 39 square miles.

The area under cultivation is being gradually extended, especially in the Bārind, which is being reclaimed by the Santāls. Little use has been made of the Land Improvement and Agriculturists' Loans Acts, except in 1892-3, when Rs. 6,000 was advanced under the latter Act owing to the partial failure of the crops. Improvements in agricultural practice.

The local cattle are small and feeble, but large importations take place from the western Districts, the principal markets being the Nekmard and Alawakhawa fairs. Cattle.

Coarse gunny cloth is woven by hand, and matting is made. *Photā*, a coarse but strong and durable striped cotton cloth, and a small quantity of a wild silk called *endi* are also manufactured, while reed mats are made in the north-west of the District. Arts and manufactures.

The external trade is mainly with Calcutta, the chief exports being rice, jute, and gunny, and the chief imports European piece-goods, salt, kerosene oil, coal, sugar, and gunny-bags. Large quantities of rice are also supplied to the neighbouring Districts, and to Nadiā, Farīdpur, and elsewhere; mustard seed and gram are imported from Purnea, and the latter is exported, chiefly to Jalpaigurī. The railway conveys the bulk of the traffic, but a great deal of rice is carried by the Mahānandā river to the western Districts. The business in jute and kerosene oil is for the most part in the hands of European firms. Commerce.

The northern section of the Eastern Bengal State Railway (metre gauge) traverses the eastern angle of the District from south to north; the Bihār section leaves the main line at Pārvatīpur junction and runs westwards across the centre of the District, passing through Dinājpur town. Including 43 miles of village tracks, the District contains 1,097 miles of roads, of which only 2½ miles are metalled. These are all maintained by the District board. The most important are the Ganges-Darjeeling road which passes through Dinājpur town, and the main roads connecting Dinājpur with Purnea, Rangpur, Bogra, and Mālda. Railways and roads.

The famine of 1874 was severely felt, the price of rice Famine.

rising to 3 seers 5 chittacks per rupee. Relief was afforded on a lavish scale.

District subdivisions and staff.

For administrative purposes the District is divided into three subdivisions, with head-quarters at DINĀJPUR, THĀKURGAON, and BĀLURGHĀT. At Dinājpur, subordinate to the District Magistrate-Collector, are five Deputy-Collectors. The Thākurgaon and Bālurghāt subdivisions are each in charge of a Deputy-Magistrate-Collector.

Civil and criminal justice.

The civil courts include those of the District and Sessions Judge, of a Sub-Judge at Dinājpur, who is also additional Subordinate Judge of Jalpaigurī, where he holds periodical sittings, and of five Munsifs, of whom two are stationed at Dinājpur and the others at Bālurghāt, Raiganj, and Thākurgaon. Criminal work is disposed of by the courts of the Sessions Judge, District Magistrate, and the Deputy-Magistrates. Dinājpur has an evil reputation for gangs of dacoits, and riots arising out of disputes about land are common.

Land revenue.

In 1762, shortly before the British took over the administration of Bengal, the revenue of the District as then constituted was settled at 26 lakhs. This sum, however, was never realized; in the first year of British rule (1765) it was reduced to 18 lakhs, and nine years later to 15 lakhs. In 1782 Rājā Devī Singh held a farm of the three Districts of Dinājpur, Rangpur, and Idrakpur, and for that first mentioned he agreed to pay 17 lakhs. His exactions, however, drove the cultivators into rebellion, and the assessment was again reduced to 15 lakhs, which remained unaltered until the Permanent Settlement in 1793. Up to this date the greater part of the District had been included in the *zamīndāri* of the Rājā of Dinājpur; but, owing to the mismanagement of Rājā Rādha Nāth, the greater portion of his estate was sold in 1796 for arrears of land revenue. The current demand for land revenue in 1903–4 was 15·21 lakhs, payable by 762 estates, all of which are permanently settled except 3 small estates with a revenue of Rs. 54. The average rate of rent is exceptionally low for Bengal proper, being only Rs. 2–4–10 per cultivated acre. The prevailing rates vary in different parts of the District; they ordinarily range between 8 annas and Rs. 3 per acre, but in some parts they do not rise above R. 1–8, while in others they occasionally reach Rs. 4, and even Rs. 6 and Rs. 8 for the best jute and tobacco lands. The incidence of land revenue is R. 0–15–6 per acre; owing to the low rates of rent prevalent, this represents 44 per cent. of the rental, a higher percentage than elsewhere in Bengal proper.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	16,24	16,59	15,24	15,11
Total revenue . .	20,32	21,90	20,03	21,61

Local and municipal government.

Outside the municipality of Dinājpur, local affairs are managed by the District board and the local board at Thākurgaon subordinate to it. In 1903–4 the income of the District board was Rs. 1,46,000, including Rs. 82,000 derived from rates; and the expenditure was Rs. 1,78,000, of which Rs. 88,000 was spent on public works and Rs. 40,000 on education.

Police and jails.

The District contains 15 *thānas* or police stations and 8 outposts. The regular force under the District Superintendent consisted in 1903 of 3 inspectors, 43 sub-inspectors, 31 head constables, and 394 constables. There was, in addition, a rural police of 319 *daffadārs* and 3,687 *chaukīdārs*. The District jail at Dinājpur town has accommodation for 291 prisoners, and sub-jails at Thākurgaon and Bālurghāt for 18 and 20 respectively.

Education.

Education is very backward, though less so than in the adjoining Districts, and of the whole population only 5·3 per cent. (9·9 males and 0·3 females) could read and write in 1901. Considerable progress has, however, been made of recent years. The total number of pupils under instruction increased from 11,188 in 1881–2 to 21,549 in 1892–3 and 23,960 in 1900–1, while 24,761 boys and 2,285 girls were at school in 1903–4, being respectively 20·2 and 2 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 1,054, including 35 secondary and 998 primary schools. The total expenditure on education was 1·24 lakhs, of which Rs. 9,000 was met from Provincial funds, Rs. 37,000 from District funds, Rs. 1,100 from municipal funds, and Rs. 61,000 from fees.

Medical.

In 1903 the District contained 9 dispensaries, of which 3 had accommodation for 50 in-patients. About 43,000 out-patients and 733 in-patients were treated during the year, and 1,314 operations were performed. The expenditure was Rs. 17,000, and the income Rs. 20,000, of which Rs. 5,000 was derived from Government contributions, Rs. 2,000 from Local and Rs. 4,000 from municipal funds, and Rs. 8,000 from subscriptions.

Vaccination. Vaccination is compulsory only in the municipality of Dinājpur. In 1903-4 the number of persons successfully vaccinated was 40,000, or 26 per 1,000 of the population.

[F. Buchanan Hamilton, *A Geographical Description of Dinājpur* (Calcutta, 1833); Martin, *Eastern India*, vol. ii (1838); Sir W. W. Hunter, *Statistical Account of Bengal*, vol. vii (1876).]

Dinājpur Subdivision.—Head-quarters subdivision of Dinājpur District, Eastern Bengal and Assam, lying between 25° 14′ and 25° 50′ N. and 89° 2′ and 89° 19′ E., with an area of 1,598 square miles. The subdivision is entirely alluvial with the exception of the Nawābganj *thāna* in the south, which lies within the Bārind, an elevated tract of undulating country. The population in 1901 was 637,364, compared with 612,617 in 1891; the density is only 399 persons per square mile. It contains 3,220 villages and one town, DINĀJPUR (population, 13,430), the head-quarters; the next most important place is RAIGANJ, a large trading centre. GHORĀGHĀT possesses considerable historical interest, and throughout the subdivision are remains associated by tradition with a remote past.

Thākurgaon Subdivision.—Northern subdivision of Dinājpur District, Eastern Bengal and Assam, lying between 25° 40′ and 26° 23′ N. and 88° 2′ and 88° 39′ E., with an area of 1,171 square miles. The subdivision is an alluvial tract, through which several rivers pursue a southerly course. The population in 1901 was 543,086, compared with 531,408 in 1891, the density being 464 persons per square mile. It contains 1,990 villages, of which THĀKURGAON (population, 1,658) is the head-quarters; but no town. Two important fairs are held annually (see NEKMARD and ALAWAKHĀWA). There is a fine temple at KĀNTANAGAR.

Bālurghāt Subdivision.—Southern subdivision of Dinājpur District, Eastern Bengal and Assam, lying between 24° 55′ and 25° 32′ N. and 88° 25′ and 89° 0′ E., with an area of 1,177 square miles. The northern part of the subdivision is a flat alluvial plain; but to the south this merges in the Bārind, where the ground is elevated and covered with brushwood, which is now yielding to the axe and plough. The subdivision was constituted in November, 1904, out of part of the old head-quarters subdivision. The population of this tract in 1901 was 386,630, compared with 338,545 in 1891, the density being 328 persons per square mile. In the sparsely populated Bārind tract a rapid increase is now taking place. It contains 2,631 villages, of which BĀLURGHĀT is the head-quarters; but no town. There are interesting historical remains at Devikot.

Alawakhāwa.—A celebrated fair held annually in October or November at Bālia village in the Thākurgaon subdivision of Dinājpur District, Eastern Bengal and Assam (26° 18′ N. and 88° 21′ E.), on the occasion of the Rāsh-pūrnima festival in honour of Krishna. The name is derived from the offerings of dried rice with which the god is worshipped. The fair lasts from eight to fifteen days, and is attended by about 85,000 persons; it is principally a cattle fair, but much miscellaneous trading is also done.

Bālurghāt Village.—Head-quarters of the subdivision of the same name in Dinājpur District, Eastern Bengal and Assam, situated in 25° 13′ N. and 88° 47′ E., on the east bank of the Atrai river. Population (1901), 2,331. It contains the usual public offices; the sub-jail has accommodation for 20 prisoners.

Bārind.—Elevated tract in Eastern Bengal and Assam, occupying a considerable area on the confines of the Districts of Dinājpur, Mālda, Rājshāhi, and Bogra. It derives its name from the old Hindu kingdom of BĀRENDRA. It belongs to an older alluvial formation than the surrounding country, and is composed of argillaceous beds of a rather pale reddish-brown hue, often weathering yellowish, in which *kankar* and pisolitic ferruginous concretions frequently occur. It is covered in many places with a scrub jungle, the predominant tree being the *sāl* (*Shorea robusta*). It is now being reclaimed by the Santāls, Mundās, and Oraons, large numbers of whom have immigrated into this tract, attracted by the prospect of holding their new clearances rent free for a few years. As soon as rent is demanded, they move on, leaving the fields they have cleared to be occupied by the less hardy local cultivators, who have not the energy to clear land for themselves.

Devīkot.—Ruins in the Bālurghāt subdivision of Dinājpur District, Eastern Bengal and Assam, situated in 25° 11′ N. and 89° E., on the left bank of the Pūrnabhabā river, and possessing great archaeological interest. According to legend, this was the citadel of Bānnagar, the fortress of an Asur or giant known as Bān Rājā. There are numerous Hindu remains in the shape of stone pillars and sculptures, and large mounds of brick ruins. The citadel is a quadrangle of 1,800 by 1,500 feet, surrounded by a high brick rampart, and enclosed on the south and east by a moat, which has been obliterated on the other sides by the Pūrnabhabā river. On the west face of the citadel is a large projection, which probably formed the outworks before the gate. In the centre is a great heap of bricks said to have been the Rājā's house, and on the east face is a gate with a cause-

way, about 200 feet long, leading across the ditch into the city; this was in the form of a square with sides about a mile long, and was surrounded by a rampart of brick and a ditch. Near Bānnagar are two great tanks known as the Dhal ('white') and the Kāla ('black') Dīghi; on the banks of the latter and in its vicinity are a number of Hindu temples also connected by tradition with this ruler.

In historical times Devīkot was the northern capital of the Muhammadan governors of Bengal, and it was here that Muhammad-i-Bakhtyār Khiljī died in 1206, after his ill-fated expedition into Tibet. There are the ruins of a mosque and the shrine of a *pīr* or saint, named Atā-ud-dīn or Atā Ullah, said to have been the spiritual guide of Muhammad. An inscription in the mosque gives the date as 1203, and it must therefore have been built immediately after the first Muhammadan conquest of Bengal. At the end of the fifteenth century it was the site of a strong military and administrative outpost under Alā-ud-dīn Husain.

[Martin, *Eastern India*, vol. ii, pp. 659–64; *Reports, Archaeological Survey of India*, vol. xv, pp. 95–104.]

Dinājpur Town. — Head-quarters of Dinājpur District, Eastern Bengal and Assam, situated in 25° 38′ N. and 88° 38′ E., on the east bank of the Pūrnabhabā just below its junction with the Dhāp river. Population (1901), 13,430. Dinājpur was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 35,000, and the expenditure Rs. 31,000. In 1903–4 the income was Rs. 45,000, including Rs. 13,000 derived from a tax on persons (or property tax), Rs. 8,000 from a conservancy rate, and Rs. 6,000 from a tax on vehicles. The expenditure in the same year was Rs. 43,000. Two drains were constructed between 1894 and 1900 at a cost of Rs. 20,000. The town contains the usual public offices. The jail has accommodation for 291 prisoners; and the jail industries carried on are oil-pressing, carpet-making, flour-grinding, twine-making, cane and bamboo work, brick-making and *surki*-grinding, and the preparation of treasury money-bags. A high school is managed by Government.

Ghorāghāt.—Ruined city in the head-quarters subdivision of Dinājpur District, Eastern Bengal and Assam, situated in 25° 15′ N. and 89° 18′ E., on the west bank of the Karatoyā river. Some ruins are connected by legend with Virāt Rājā of the Mahābhārata, in whose court Yudhishthira with his four brothers and wife found exile. There are also the remains of a strong military and administrative outpost established

under Muhammadan rule at the end of the fifteenth century by Alā-ud-dīn Husain.

[Martin, *Eastern India*, vol. ii, pp. 678–81.]

Kāntanagar.—Village in the Thākurgaon subdivision of Dinājpur District, Eastern Bengal and Assam, situated in 25° 48′ N. and 88° 39′ E. It is the site of a fine eighteenth-century Hindu temple to Kāntajī (Vishnu), the family god of the Rājā of Dinājpur. The foundation was laid in 1704, but the finest portion was not completed till 1772; the temple was badly damaged in the earthquake of 1897. The place is much resorted to, and an annual fair is held here at the time of the Rāsh festival in October–November.

[Martin, *Eastern India*, vol. ii, p. 628.]

Nekmard.—A long-established fair till recently held annually for a week in the middle of April in the village of Bhawānandpur in the Thākurgaon subdivision of Dinājpur District, Eastern Bengal and Assam (25° 59′ N. and 88° 16′ E.), near the tomb of a Muhammadan saint from which it takes its name. It is one of the largest cattle fairs in the Province, being attended by about 150,000 people from all parts of the country. Bullocks, principally from Bihār, are bought up by agents from Mymensingh and adjacent Districts; ponies from the Bhutān hills, country-bred horses from Bihār, elephants, and camels are also sold in large numbers; and traders frequent the fair with miscellaneous articles of every description from the farthest corners of India. In recent years Government has prohibited the holding of this fair as a precaution against plague.

Pārvatīpur.—Village in the head-quarters subdivision of Dinājpur District, Eastern Bengal and Assam, situated in 25° 40′ N. and 88° 56′ E. Population (1901), 1,787. It is an important railway junction, where the Assam and Bihār sections of the Eastern Bengal State Railway branch off east and west from the main line.

Raiganj.—Village in the head-quarters subdivision of Dinājpur District, Eastern Bengal and Assam, situated in 25° 37′ N. and 88° 9′ E., on the Kulik river. Population (1901), 901. Raiganj is an important trade centre, exporting a large quantity of jute.

Thākurgaon Village.—Head-quarters of the subdivision of the same name in Dinājpur District, Eastern Bengal and Assam, situated in 26° 5′ N. and 88° 26′ E., on the Tāngan river. Population (1901), 1,658. It contains the usual public offices; the sub-jail has accommodation for 18 prisoners.

Boundaries, configuration, and hill and river systems.

Jalpaigurī District.—District in the north-east of the Rājshāhi Division, Eastern Bengal and Assam, lying between 26° and 27° N. and 88° 20′ and 89° 53′ E., with an area of 2,962 square miles. It is bounded on the north by Darjeeling and the State of Bhutān; on the south by Dinājpur, Rangpur, and the State of Cooch Behār; on the west by Dinājpur, Purnea, and Darjeeling; on the east the Sankos river separates it from the Goālpāra District of Assam.

The District comprises two well-defined tracts, which differ alike in history and in administration. The older portion, which is known as the Regulation tract because it is administered under the ordinary laws and regulations in force in Bengal proper, lies for the most part west of the Tīsta, though it comprises also the Pātgrām *thāna* east of that river. It originally formed part of Rangpur, which it closely resembles. The continuous expanse of level paddy-fields is broken only by the groves of bamboos, palms, and fruit-trees which encircle the homesteads of the substantial tenant-farmers. In this tract there is but little untilled land, with the exception of an extensive and once valuable *sāl* (*Shorea robusta*) forest of 60 square miles, which belongs to the Raikat of Baikuntpur.

East of the Tīsta, and hemmed in between the States of Cooch Behār on the south and Bhutān on the north, lies a strip of submontane country 22 miles in width, which was annexed from Bhutān in 1865, and is known as the WESTERN DUĀRS. This part of the District is flat except in the north-east corner, where the SINCHULĀ Hills rise abruptly to a height of from 4,000 to 6,000 feet. On an outlying spur of this range, 2,000 feet in height, is built the military station of BUXA, which commands one of the principal passes into Bhutān.

The scenery along the foot of the mountains, where the great rivers debouch upon the plains, is very grand and beautiful, the blue outline of the Bhutān range forming a magnificent background. The principal rivers, proceeding from west to east, are the MAHĀNANDĀ, KARATOYĀ, TĪSTA, Jaldhākā, Duduyā, Mujnai, TORSĀ, Kāljāni, Raidāk, and SANKOSH, which all flow down from the hills in a southerly direction and ultimately discharge their waters by various channels into the Ganges or the Brahmaputra. They are constantly changing their main channels, and the country is everywhere seamed by deserted river-beds. The Jaldhākā, or Di-chu, drains the eastern slopes of the Rishi La in Darjeeling District, of which it forms the eastern boundary. It joins the Torsā in Rangpur District, and the combined stream falls into the Brahmaputra by two

mouths. Though a wide river, the Jaldhākā is very shallow and is fordable in every part during the winter months. The Duduyā and Mujnai, tributaries of the Jaldhākā, are navigable throughout the year by boats of 2 tons as far as the Alīpur-Jalpaigurī road and Fālākāta respectively. The Torsā rises in the Chumbi valley of Tibet, where it is known as the Amo-chu, and flows through Bhutān; it is navigable by cargo boats during the rains. The Kāljāni, which is formed by the combined waters of the Alaikurī and Dimā, after a course of a few miles enters the Cooch Behār State; it is used to float down timber from the forests at the foot of the hills. The Raidāk rises near the Chumalhari mountain in Tibet. This river and the Sankosh, which forms the boundary between the Eastern and Western Duārs, thus separating Eastern Bengal from Assam, flow into the Brahmaputra a few miles below Dhubri. Both rivers are navigable by boats of 3 or 4 tons for a considerable portion of their course, but 5 or 10 miles before reaching the hills navigation is impeded by rapids.

Geology. With the exception of the Buxa hills, the District is covered by recent alluvial deposits, consisting of coarse gravels at the foot of the hills, sandy clay and sand along the course of the rivers, and fine sand consolidating into clay in the other parts of the river plain. The Buxa hills are composed of a series of beds named after them, which consist of variegated slates, quartzites, and dolomites, and are fringed on the south by low hills of Upper Tertiary strata. About half a mile west of Buxa copper ore occurs in greenish slate with quartzose layers, and copper ores are found also 4 miles north of Sām Sing Tea Estate, close to the boundary between Jalpaigurī and Darjeeling Districts. Masses of calcareous tufa occur along the base of the hills[1].

Botany. In the Regulation portion of the District and the south of the Duārs the tree vegetation is sparse and rather stunted except in the Baikuntpur jungle, and the greater portion of the surface is covered with grasses, the commonest of these being *Imperata arundinacea* and *Andropogon aciculatus*. Among the trees, the most conspicuous is the red cotton-tree (*Bombax malabaricum*); the *sissū* (*Dalbergia Sissoo*), mango, jack, *pīpal*, and tamarind occur as planted or sometimes self-sown species. The villages are surrounded by thickets or shrubberies of semi-spontaneous growth and weedy character. Areca palms are common, and bamboos thrive luxuriantly. Along the

[1] F. R. Mallet, 'Geology of Darjeeling and Western Duārs,' *Memoirs, Geological Survey of India*, vol. xi, pt. i.

north of the Duārs are large upland tracts of forest, part of which has been 'reserved' and is described below, declining southwards into plains of heavy grass jungle. Many varieties of orchids bloom in the forests; and there is a curious creeper, the *pāni lahrā* (*Vitis repanda*), from whose stem water is obtained.

Fauna.

The District is famous for its big game, which include wild elephants, bison, rhinoceros, buffaloes, tigers, leopards, bears, wild hog, swamp deer (*Cervus duvauceli*), and *sāmbar* (*Cervus unicolor*). A few elephants are caught on behalf of Government. The number of rhinoceros, bison, and buffaloes has been rapidly decreasing; and to prevent their extinction, they are now protected in the 'reserved' forests. Good mahseer fishing is to be had where the Jaldhākā, Torsā, Raidāk, and Sankosh debouch from the Himālayas.

Temperature and rainfall.

The temperature is rarely excessive; the mean, which is 62° in January, rises to 73° in March and 79° in April, but it does not reach its highest point until July and August, when it is 83°. The highest mean maximum is 90° in April, and the highest maximum recorded was 103° in 1899. Rainfall is exceptionally heavy, the average varying from 122 inches at Jalpaigurī town to 209 inches at Buxa; and the normal mean is 129 inches, of which 12·3 inches occur in May, 25·6 in June, 28·1 in July, 27·4 in August, and 21·4 in September.

Natural calamities.

In September, 1902, an exceptionally high flood caused great damage in the tract between Jalpaigurī and Mandalghāt, bounded on the east by the Tīsta and on the west by the railway embankment, and also in the Maynāgurī *tahsīl* between the Dharlā and the Tīsta; the roads and the railway embankment were breached, hundreds of cattle were drowned, and ten lives were lost. In the earthquake of 1897 much damage was done to roads by subsidence and the opening of deep fissures, and many bridges and buildings were destroyed.

History.

In prehistoric times the District formed part of the powerful kingdom of PRĀGJYOTISHA or Kāmarūpa, as it was subsequently called, which extended as far west as the Karatoyā. There is a legend that a temple was originally erected on the site of the present temple at JALPES by a Rājā named Jalpeswar, in whose day the Jalpes *lingam* first appeared. There are extensive remains at BHITARGARH, which is said to have formed the capital of a Sūdra king named Prithu. The Bengal Pāl dynasty included this District in its dominions; and so did the Khen Rājās—Nīladhwaj, Chakradhwaj, and Nīlāmbar—of whom the first founded the city of KAMĀTĀPUR in Cooch

Behār. It subsequently formed part of the Koch kingdom founded by Biswa Singh; and when that kingdom fell to pieces, the western part was annexed by the Mughals. There was a long struggle for the possession of Pātgrām and Bodā; but at the beginning of the eighteenth century they were nominally ceded to the Muhammadans, a cousin of the Cooch Behār Rājā continuing to farm them on his behalf. After the Muhammadan conquest it was included in the frontier *faujdāri* (magisterial jurisdiction) of Fakīrkundi or Rangpur, and passed to the East India Company with the cession of the Dīwāni in 1765.

The enormous area of the old District of Rangpur and the weakness of the administrative staff prevented the Collector from preserving order in the more remote parts, which thus became an Alsatia of banditti. In the year 1789 the Collector conducted a regular campaign against these disturbers of the peace, and with a force of 200 *barkandāz* blockaded them in the great forest of Baikuntpur. They were at last compelled to surrender, and within a single year no less than 549 robbers were brought to trial.

Meanwhile the Duārs, or lowland passes, had fallen to the Bhotiās, who found here the cultivable ground that their own bare mountains did not afford. They exercised predominant influence over the whole tract from the frontier of Sikkim as far east as Darrang, and frequently enforced claims of suzerainty over the enfeebled State of Cooch Behār. They do not appear to have occupied this tract permanently, but merely to have exacted a heavy tribute, and subjected the inhabitants to the cruellest treatment. Cooch Behār was delivered from the Bhotiā tyranny by the treaty of 1773; but the Bhutān Duārs, as they were called, remained for nearly a century longer in a state of anarchy. They were annexed after the Bhutān War of 1865; they were then divided into the Eastern and Western Duārs, of which the former have since been incorporated with the Assam District of GOĀLPĀRA. In 1867 the Dālingkot subdivision of the Western Duārs, which lies high up among the mountains, was added to DARJEELING, and the remaining part was in 1869 united with the Titālya subdivision of Rangpur to form the new District of Jalpaigurī.

The permanently settled portion of Jalpaigurī, which includes the old *chaklas* of Pātgrām and Bodā and the old Rāj of Baikuntpur, has no history of its own apart from the parent District of Rangpur. Its boundaries are perplexingly intermingled with those of the State of Cooch Behār, to which,

as we have seen, it belonged until comparatively recent times. At the present day by far the wealthiest landowners are the Mahārāja of Cooch Behār and the Raikat of Baikuntpur, who is descended from a younger branch of the same family.

Archaeology. In addition to the old fort at BHITARGARH and the temple at JALPES, there are the remains at Bodā of a smaller fort about a mile square, supposed to be coeval with the fort at Bhitargarh. In the south of the District, small forts, temples, and old tanks are numerous.

The people. The population increased from 417,855 in 1872 to 580,570 in 1881, 680,736 in 1891, and 787,380 in 1901. Though the figures for 1872 cannot be accepted as accurate, there has been a continuous growth of population due entirely to the rapid development of the Western Duārs; and in 1901 more than one-fifth of the population was composed of immigrants from elsewhere. Malaria is always prevalent in the *tarai*, and in eight years of the decade ending 1901 Jalpaigurī figured among the six Districts with the highest recorded mortality from fever in Bengal. Spleen and goitre are common diseases, and the proportion of persons suffering from insanity and deaf-mutism is higher than in most parts of Bengal.

The chief statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Jalpaigurī .	1,820	1	588	668,027	367	+ 9·8	27,605
Alīpur . .	1,142	1	178	119,353	105	+ 64·7	3,229
District total	2,962	2	766	787,380	266	+ 15·7	30,834

The two towns are JALPAIGURĪ, the head-quarters, and the cantonment at BUXA. Outside these, more than half of the population are contained in villages with 2,000 or more inhabitants, and only 13 per cent. in villages with a population of less than 500. The census village in this District was, however, merely a territorial unit and did not correspond to the residential village. The latter, in fact, can scarcely be said to exist; for the country is divided into small farms each with its central homestead, the residence of the farmer or *jotdār*, surrounded by the houses of his immediate relatives and perhaps an under-tenant or two. In the north-west of the District the conditions of the tea industry have given rise to large settlements of labourers, the average population of

which is over 3,000 souls. The density is very low; in only one *thāna* does the population exceed 500 per square mile, and in only three more does it exceed 400. The Duārs, which were very sparsely inhabited when first acquired, carry a smaller population than the rest of the District. Towards the west this tract has filled up rapidly owing to the extension of tea cultivation; but in the east the population is still very scanty, and in the Alīpur *thāna* it averages only 89 persons per square mile, in spite of an increase of 70 per cent. during the last ten years. There is a steady movement of the population from the west of the District towards the extensive tracts of cultivable land east of the Tīsta, and there is also an enormous immigration of tea-garden coolies from Chotā Nāgpur and the Santāl Parganas; Rānchī alone supplies 80,000, chiefly Oraons and Mundās, and the Santāl Parganas, 11,000. Many of these coolies are settling down permanently, either in the gardens or as cultivators and cart-owners, but many return home at intervals. In the tea gardens on the higher slopes at the foot of the hills, Nepālese replace men from Chotā Nāgpur, and many of these also find a permanent home in the District. Numerous up-country coolies are employed on the roads and railways, but most of them return home at the end of the cold season.

A corrupt dialect of Bengali, known as Rangpurī or Rājbansī, is the language of the District, being spoken by 77 per cent. of the population; Hindī is the vernacular of 6 per cent. and Kurukh of 7 per cent.; Mech is spoken by over 20,000 persons, and Khās, Mundārī, and Santālī by more than 10,000 each. This great diversity of languages is due to the large number of immigrants. Hindus (534,625) form 68 per cent. of the population, Muhammadans (228,487) 29 per cent., and Animists 2 per cent., while the remainder are Christians or Buddhists.

Castes and occupations.

The proportion of Muhammadans has declined since 1872, when they formed 34·6 per cent. of the population. They are chiefly Shaikhs and Nasyas, and are, for the most part, converts from the aboriginal Koch and Mech races. They still retain many beliefs and superstitions derived from their ancestors, and live on good terms side by side with the Rājbansis (Koch), to whom more than three-fifths of the Hindu population belong; it is, in fact, not unusual to find Muhammadan and Rājbansi families dwelling together in the same homestead, although in separate houses. The Mech, a western branch of the great Kachāri tribe, number about 22,000, found chiefly in

the Alīpur and Fālākāta *thānas* in the Duārs. These, like their Gāro neighbours, are a nomadic people, who live by agriculture in its simplest and most primitive form. No less than 89·4 per cent. of the population, or over 700,000 persons, are supported by agriculture—a very high proportion; a sixth of these derive their livelihood from the tea gardens. Of the remainder, industries maintain 4·6, commerce 0·3, and the professions 0·6 per cent.

Christian missions.

The Baptist Missionary Society has a branch in Jalpaigurī town; the Church Missionary Society carries on work among the Santāl colony in the Alīpur subdivision, the Scandinavian Alliance Mission among the Bhotiās, and the Free Church of Scotland among the tea-garden coolies. The number of native Christians in 1901 was 2,141.

General agricultural conditions.

The alluvial soil with which the greater part of the District is covered is extremely fertile. In the low levels between the Tīsta and the Sankosh coarse rice, oilseeds, potatoes, castor, and areca palms grow abundantly. West of the Tīsta, a superior variety of jute, known as *rājganja*, is grown, and also fine rice and wheat. In the basin between the Tīsta and the Jaldhākā a hard black clayey soil is found, which yields excellent pasture and fine crops of tobacco. The ferruginous clay of the uplands in the north of the Duārs is exceptionally well suited to the tea plant.

Chief agricultural statistics and principal crops.

The chief agricultural statistics for 1903–4 are as follows, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.	Forest.
Jalpaigurī . .	1,820	934	296	137
Alīpur . . .	1,142	432	341	359
Total	2,962	1,366	637	496

The staple food-crop of the District is rice, grown on 1,017 square miles, or 74 per cent. of the net area cropped; the winter rice, which is the chief crop, covering 54 per cent. of that area. The cultivation of the early rice, which is sown broadcast on high lands, begins in March. The early varieties, sown in March or April, are reaped in June and July; but the greater part is sown in April and May, and not reaped till August or September. The winter rice is sown broadcast in nurseries in May and June, transplanted from the middle of July to the middle of September, and reaped during December and January. After rice, tobacco is most widely grown, occupy-

ing 185 square miles, or nearly 14 per cent. of the cultivated area; Jalpaigurī is, in fact, after Rangpur, the chief tobacco-producing District in Eastern Bengal. Jute cultivation is extending rapidly, and in 1903 occupied 103 square miles. Mustard is also widely cultivated, and cotton is grown in small quantities by the Gāros and Mech on uplands at the foot of the Bhutān hills.

Tea. Tea is cultivated on 121 square miles, or 9 per cent of the area under cultivation. This industry was introduced in 1874, and is carried on mainly by European enterprise and with European capital. In 1876 there were thirteen gardens, with an area of 818 acres, yielding 29,520 lb. of tea. The cultivation was very rapidly extended during the last decade of the nineteenth century; and by 1901 the number of gardens had increased to 235, with a planted area of 109 square miles, and an out-turn of over 31,000,000 lb. These gardens also possessed an unplanted area of 255 square miles. In 1903 the number of gardens decreased to 207, but the gross yield in that year amounted to nearly 37,000,000 lb. Jalpaigurī has an important advantage over the tea Districts of Assam, as labour finds its way thither freely and no special law is necessary to enforce labour contracts. The production of tea of late years has increased so much more rapidly than its consumption that there has been a heavy fall in prices, and the industry has suffered in consequence.

Improvements in agricultural practice. The area under cultivation is extending rapidly in the Western Duārs, where there is still much cultivable waste; the rates of rent are very low, and cultivators are attracted not only from the *thānas* west of the Tīsta, but also from Rangpur and Cooch Behār State. Little use has been made of the Agriculturists' and Land Improvement Loans Acts; during the decade ending 1901–2 an average of Rs. 2,000 per annum was advanced under the former Act.

Cattle. The local cattle are small and weakly, and no attempts have been made to improve the breed. Pasturage is so abundant that in the northern *thānas* of the Western Duārs rice straw is left to rot in the fields, while large herds of cattle from Bengal and Bhutān are brought to graze in the Baikuntpur jungle during the winter months. Fairs are held at ALĪPUR, JALPES, and FĀLĀKĀTA.

Irrigation. The soil for the most part derives sufficient moisture from the heavy rainfall, but low lands are in some places irrigated from the hill streams.

of Government. With the exception of 5 square miles of 'protected' forests in the Government estates of Fālākāta and Maynāgurī, which are managed by the Deputy-Commissioner, these are all 'reserved' forests under the management of the Forest department. The latter in 1903–4 yielded a revenue of Rs. 1,18,000. They are divided into the Jalpaigurī and Buxa divisions, the former comprising all the forests between the Tīsta and the Torsā rivers, with an area of 183 square miles; and the latter, those between the Torsā and the Sankosh, with an area of 308 square miles. The trees are of many different kinds, but there are five well-defined types: namely, *sāl* (*Shorea robusta*); mixed forest without *sāl*; mixed *chilauni* (*Schima Wallichii*) forest; *khair* (*Acacia Catechu*) and *sissū* (*Dalbergia Sissoo*) forest; and savannahs. Of these the *sāl* is the most important, and occurs either nearly pure or mixed with varying proportions of *Dillenia pentagyna*, *Careya arborea*, *Sterculia villosa*, *Schima Wallichii*, *Terminalia tomentosa*, and *T. bellerica*, &c. The mixed forests are composed chiefly of *Lagerstroemia parviflora*, *Callicarpa arborea*, *Sterculia villosa*, *Hymen trijuga*, and often *Terminalia tomentosa* and *Albizzia*. The *chilauni* type of forest is more clear of other subsidiary species than ordinary mixed forest, the *chilauni* being the predominant species and growing to a large size. *Khair* and *sissū* are found pure in the alluvial deposits of most of the large rivers. The savannahs, or large stretches of grass land devoid of trees, deserve mention both on account of their extent and their bearing on the work of fire protection. The *sāl* forest belonging to the Raikat of Baikuntpur is now of little value, owing to promiscuous felling. The Rājbansis and Mech collect what little jungle produce there is, principally chiretta, lac, and beeswax. Small quantities of long pepper (*Piper longum*) are also collected by the Forest department.

Minerals. The only mineral of importance is limestone, which is largely quarried in the shape of calcareous tufa along the base of the Bhutān hills. A small copper-mine at Chunābāti, 2 miles from Buxa, was formerly worked by Nepālese. Coal is found near Bāgrākot, and a company has been formed to mine it.

Arts and manufactures. Gunny cloth of a very coarse quality is woven in the western part of the District. The lower classes also manufacture for home use a coarse silk (called *endi*) from the silk of worms fed on the castor-oil plant, and a striped cotton cloth called *photā*.

Commerce. The development of the tea industry and the influx of a large cooly population into the Duārs, combined with the facilities of railway communication, have given a great impetus to trade;

and at the large markets which have sprung up in the neighbourhood of the tea gardens, the cultivator finds a ready market for his rice, vegetables, and other produce. There is also a fair amount of trade with Bhutān, which has been stimulated by the establishment of fairs at FĀLĀKĀTA and ALĪPUR. The chief exports to Bhutān are European piece-goods and silk, while timber and oranges are the principal imports. The local supply of rice being insufficient, considerable quantities are imported from Dinājpur; cotton piece-goods, machinery, corrugated iron, kerosene oil, coal and coke are also imported on a large scale. The tea, tobacco, and jute crops are all grown for export. The tea and jute are railed to Calcutta; the tobacco trade is chiefly in the hands of Arakanese who export the leaves to Burma, where they are made into cheroots. The railways have now monopolized most of the trade; but *sāl* timber is floated down from the forests of the Western Duārs and the Baikuntpur jungle to the Brahmaputra *en route* for Sirājganj, Dacca, and elsewhere; and tobacco, mustard seed, jute, cotton, and hides are also exported by water to these markets, the chief centre being Baura. The up-stream traffic is practically confined to the importation of earthen cooking utensils, coco-nuts, molasses, small quantities of *dāl* (*Arabica revalenta*), and miscellaneous articles from Dacca and Farīdpur. Apart from the large tea-garden markets and the fair of JALPES, the principal trading centres are JALPAIGURĪ TOWN, Titālya on the Mahānandā where the great north road enters the District, Rājnagar, Sāldānga, Debīganj on the Karatoyā, BAURA, Jorpokri, Maynāgurī, Fālākāta, Alīpur, and Buxa.

The District is well served by railways. The western portion is traversed from south to north by the Eastern Bengal State Railway, which has its northern terminus just over the Darjeeling border at Silīgurī. The Bengal-Duārs Railway leaves the Pārvatīpur-Dhubri branch of the Eastern Bengal State Railway at Lālmanir Hāt, and runs north-west through Pātgrām to Barnes Ghāt, on the east bank of the Tīsta opposite Jalpaigurī town, where a ferry connects with the Eastern Bengal State Railway; at Māl Bāzār it bifurcates, one branch running west through Dām-Dim to Bāgrākot, and another east to Mādāri Hāt. In the east the Cooch Behār State Railway enters the District at Alīpur and runs north to Jaintī. Railways.

The District contains 877 miles of roads, of which 106 miles are maintained by the Public Works department and the remainder by the District board. Of the latter, 24 miles are Roads.

metalled and 747 miles are unmetalled. There are also 10 miles of village tracks. In spite of the improvement and increase in the number of roads during recent years, there is still a great deficiency in some parts of the Duārs east of the Jaldhākā river, in which it is extremely difficult to maintain good roads owing to the heavy rainfall and the rapid growth of jungle. The principal routes are those which connect Jalpaigurī town with Silīgurī, with the northern border via Dām-Dim, with a ferry on the Sankosh river, and with Alīpur. The last-mentioned road is in very good order, being well raised and bridged, except at the larger rivers, which have ferries. The central emigration road, which runs east from Dinājpur through Jalpaigurī District as far as Haldībāri station and thence through the Cooch Behār State, is an important feeder to the Eastern Bengal State Railway. The board also maintains several important Provincial roads, including the Ganges-Darjeeling road, which runs for 16 miles along the north-western border of the District from Titālya to Silīgurī, the branch-road from Titālya to Jalpaigurī, and the road from Jalpaigurī to Pātgrām. There are 80 ferries, which, with six unimportant exceptions, belong to the District board, and bring in an annual revenue of Rs. 18,000; the most important are those over the Tīsta and Jaldhākā rivers. Of late years there has been a considerable decrease in the number of ferries, owing to the opening of the Bengal-Duārs Railway and to the bridging of sixteen streams which formerly required ferries.

District subdivisions and staff.

For general administrative purposes the District is divided into two subdivisions, JALPAIGURĪ and ALĪPUR. The former is immediately under the Deputy-Commissioner; he is assisted by five Deputy-Magistrate-Collectors, of whom two are employed exclusively on revenue work. The Alīpur subdivision is in the charge of a European Deputy-Magistrate-Collector. The Maynāgurī, Fālākāta, and Alīpur circles in the settled tracts of the Duārs are in charge of three Sub-Deputy-Collectors. Two Forest officers manage the Jalpaigurī and Buxa divisions, and an extra assistant Conservator is attached to the former division.

Civil and criminal justice.

Jalpaigurī forms, with Rangpur, the charge of a single District and Sessions Judge, and the Sub-Judge of Dinājpur is an additional Sub-Judge in this District. The other civil courts are those of two Munsifs at Jalpaigurī town and of the subdivisional officer of Alīpur, who is vested with the powers of a Munsif within his subdivision. The Deputy-Commissioner

has special additional powers under section 34 of the Criminal Procedure Code. Subordinate to him are three Deputy-Magistrates at head-quarters, the subdivisional officer of Alīpur, and three benches of honorary magistrates, who sit at Jalpaigurī, Bodā, and Debīganj. As in other parts of Eastern Bengal, cases due to disputes about land are common, and dacoities are not infrequent.

Land revenue.

Pātgrām, Bodā, and the Baikuntpur estate were permanently settled in 1793 as part of the District of Rangpur. The WESTERN DUĀRS have been settled temporarily from time to time, the last settlement having been concluded in 1895. The current demand for land revenue in 1903–4 was 7·53 lakhs, of which Rs. 1,37,000 was payable by 82 permanently settled estates, Rs. 1,97,000 by 205 temporarily settled estates, and the remainder by 5 estates managed direct by Government. In the permanently settled portion of the District rents vary from Rs. 1–9 an acre, which is paid for cultivable waste, and Rs. 1–15 for once-cropped land, up to Rs. 9–2 for the best jute, rice, and homestead lands. In special cases higher rates are charged, Rs. 15 being sometimes paid for bamboo land and Rs. 24–4 for betel-leaf gardens or areca groves. In the Duārs, where Government is the immediate landlord, rates rule considerably lower: namely, 3 annas for waste, from Rs. 1–2 to Rs. 1–6 for high land, from Rs. 1–6 to Rs. 2 for low land, according to the situation with reference to markets and roads, and Rs. 3 for homestead land. In the Duārs about half the area has been let out by the *jotdārs*, or tenants holding immediately under Government, to *chukānidārs*, or subtenants, whose holdings have been recognized as permanent.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	3,62	4,23	7,03	7,46
Total revenue . .	5,37	7,54	12,43	13,49

Local and municipal government.

Outside JALPAIGURĪ municipality and BUXA cantonment, local affairs are managed by the District board, in subordination to which a local board has recently been constituted at Alīpur. In 1903–4 the income of the District board was Rs. 1,35,000, of which Rs. 69,000 was derived from rates; and the expenditure was Rs. 1,21,000, including Rs. 84,000 spent on public works.

Police and jails.

The District contains 11 *thānas* or police stations and 10 outposts. The force subordinate to the District Superintendent consists of 2 inspectors, 25 sub-inspectors, 29 head constables, and 287 constables. There is also a rural police of 1,467 village watchmen, grouped in circles under 78 head watchmen. The District jail at Jalpaigurī town has accommodation for 122, and a subsidiary jail at Alīpur for 22 prisoners.

Education.

Owing partly to the sparse population and the absence of regular village sites, education is very backward, and the proportion of persons able to read and write in 1901 was only 3·9 per cent. (7 males and 0·4 females). Considerable progress has, however, been made. The total number of pupils under instruction increased from 3,582 in 1882 to 7,623 in 1892–3 and 12,033 in 1900–1, while 13,013 boys and 935 girls were at school in 1903–4, being respectively 20·5 and 1·7 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 563, including 15 secondary and 518 primary schools. The expenditure on education was Rs. 67,000, of which Rs. 13,000 was met from Provincial funds, Rs. 20,000 from District funds, Rs. 750 from municipal funds, and Rs. 22,000 from fees. The figures include one small school for aboriginal tribes at Buxa.

Medical.

In 1903 the District contained 8 dispensaries, of which 4 had accommodation for 30 in-patients. At these the cases of 38,000 out-patients and 480 in-patients were treated during the year, and 840 operations were performed. The expenditure was Rs. 12,000, of which Rs. 4,000 was met from Government contributions, Rs. 3,000 from Local and Rs. 1,600 from municipal funds, and Rs. 3,000 from subscriptions.

Vaccination.

Vaccination is compulsory only in Jalpaigurī municipality. In 1903–4 the number of successful vaccinations was 25,000, representing 32 per 1,000 of the population. There is less opposition to infant vaccination than in most parts of Eastern and Northern Bengal.

[Martin, *Eastern India*, vol. iii (1838); Sir W. W. Hunter, *Statistical Account of Bengal*, vol. x (1876); D. Sunder, *Report on the Settlement of the Western Duārs* (Calcutta, 1895).]

Jalpaigurī Subdivision.—Head-quarters subdivision of Jalpaigurī District, Eastern Bengal and Assam, lying between 26° and 27° N. and 88° 20′ and 89° 7′ E., with an area of 1,820 square miles. The population in 1901 was 668,027, compared with 608,289 in 1891. It contains one town, JALPAIGURĪ (population, 9,708), the head-quarters; and 588 villages. The density is 367 persons per square mile, or

more than three times that of the Alīpur subdivision. The general aspect of the subdivision is that of an extensive plain, undiversified by hills or any large sheet of water, but containing extensive forests. The country is level and open, and is watered by several large rivers, including the Tīsta and Jaldhākā. It comprises two totally distinct tracts. The Maynāgurī and Dām-Dim *thānas* and the Dhupgāri outpost, which form part of the WESTERN DUĀRS acquired from Bhutān in 1865, are rapidly increasing in population and prosperity on account of the expansion of the tea industry; while the population of the western *thānas*, which are permanently settled and originally formed part of Rangpur, is declining. There are interesting ruins at BHITARGARH and JALPES. The chief centres of commerce are Jalpaigurī town, Titālya, BAURA, and Maynāgurī.

Alīpur Subdivision.—Eastern subdivision of Jalpaigurī District, Eastern Bengal and Assam, lying between 26° 24′ and 26° 51′ N. and 89° 3′ and 89° 53′ E., with an area of 1,142 square miles. The subdivision is a level strip of country, intersected by streams that debouch from the mountains, and containing large stretches of forests; but in the north-east the level surface is broken by the Sinchulā hills, which tower abruptly from the plains. The population in 1901 was 119,353 compared with 72,447 in 1891. It contains the military cantonment of BUXA (population, 581) and 178 villages, of which ALĪPUR is the head-quarters. The subdivision forms part of the WESTERN DUĀRS, and, owing to the introduction of tea cultivation, has developed very rapidly since its acquisition from Bhutān; but it is still sparsely populated and has a density of only 105 persons per square mile. The chief markets are at Alīpur, Buxa, and FĀLĀKĀTA.

Duārs, Western.—A tract in the north-east of Jalpaigurī District, Eastern Bengal and Assam, lying along the foot of the Himālayas, and including some outlying spurs, with an area of 1,862 square miles. Together with the Eastern Duārs and the Kālimpong subdivision of Darjeeling District, it was annexed in 1865, as the result of the Bhutān War. The country slopes from north-west to south-east, and is intersected by numerous rivers and hill streams which drain the Himālayas. Along the northern boundary a series of well-wooded plateaux, rising to between 1,200 and 1,500 feet, form the connecting link between the mountains and the plains. The soil—a reddish loamy clay, in places of great depth—the climate, and the rainfall, which amounts to 180 inches in the year, are all admirably

two perennial streams, one of which issues from the base of the plateau. The average annual rainfall of 209 inches is the highest recorded in Bengal.

Chotā Sinchulā.—Peak in the Sinchulā range, in the Alīpur subdivision of Jalpaigurī District, Eastern Bengal and Assam, situated in 26° 48′ N. and 89° 34′ E., about 7 miles north of Buxa cantonment and separating British from Bhutān territory. The elevation is 5,695 feet above sea-level.

Fālākāta.—Village in the Alīpur subdivision of Jalpaigurī District, Eastern Bengal and Assam, situated in 26° 31′ N. and 89° 13′ E., on the east bank of the Mujnai river within a mile of the Cooch Behār boundary. Population (1901), 287. Fālākāta is an important market, at which some of the best jute, tobacco, and mustard grown in the Duārs are sold. It lies on the main road between Jalpaigurī and Alīpur, and the river is navigable to this point by boats of 2 tons throughout the year. An annual fair lasting for a month is held in February. Agricultural produce and stock are exhibited for prizes, and the fair is visited by a large number of Bhotiās and by merchants from all parts.

Jalpaigurī Town.—Head-quarters of Jalpaigurī District, Eastern Bengal and Assam, situated in 26° 32′ N. and 88° 43′ E., on the right bank of the Tīsta. Population (1901), 9,708. The town, though small, is progressive, and is the chief distributing centre in the District. It is served by the Eastern Bengal State Railway, while Barnes Ghāt on the east bank of the Tīsta, opposite to the town, is a station on the Bengal-Duārs Railway, and the smaller marts and the tea gardens are supplied by its traders. Jalpaigurī was constituted a municipality in 1885. The income during the decade ending 1901–2 averaged Rs. 20,000, and the expenditure Rs. 18,000. In 1903–4 the income was Rs. 30,000, including Rs. 9,000 obtained from a tax on persons (or property tax) and Rs. 7,000 from a conservancy rate; and the expenditure was Rs. 25,000. Rs. 24,000 has been spent on a drainage scheme, for which an estimate of Rs. 30,000 has been sanctioned by Government. Jalpaigurī is the head-quarters of the Commissioner of the Rājshāhi Division, an Inspector of schools, an Executive Engineer, and of the Deputy-Conservators of Forests in charge of the Buxa and Jalpaigurī divisions; it is also the head-quarters of a detachment of the Northern Bengal Mounted Rifles. The town contains the usual public offices. The District jail has accommodation for 122 prisoners, who are employed in oil-pressing, twine and rope-weaving, stone-break-

ing, cane-work, and *dāl* and rice-husking, the products being disposed of locally. The chief educational institution is a high school maintained by Government, with 270 pupils on its rolls.

Jalpes.—Village in the head-quarters subdivision of Jalpaigurī District, Eastern Bengal and Assam, situated in 26° 31′ N. and 88° 52′ E. Population (1901), 2,088. It contains a temple of Siva, which was built on the site of an earlier temple by one of the Cooch Behār Rājās about three centuries ago. This, the most conspicuous ruin in the District, is a massive red-brick building, surmounted by a large dome with an outer diameter of 34 feet, round the base and top of which run galleries; it stands on a mound surrounded by a moat near the bank of the Jarda river. A flight of steps leads down to the basement, which is sunk some depth in the mound and contains a very ancient *lingam*. This *lingam* is in the hymns to Siva called *anādi* ('without beginning'), and is referred to in the Kālika Purāna, which says that somewhere in the north-west of Kāmarūpa Mahādeo appeared himself in the shape of a vast *lingam*. An old-established fair is held at Jalpes on the occasion of the Sivarātrī festival in February; it lasts for about a fortnight and is attended by the people from all parts of the District as well as from Dinājpur, Rangpur, and elsewhere. Bhotiās come from Darjeeling, Buxa, and Bhutān with ponies, skins, cloth, and blankets, and take away cotton and woollen cloths, betel-nuts, and tobacco.

[Martin, *Eastern India*, vol. iii, pp. 441–2.]

Boundaries, configuration, and river system.

Mālda District (*Māldaha*).—District in the Rājshāhi Division of Eastern Bengal and Assam, lying between 24° 30′ and 25° 32′ N. and 87° 46′ and 88° 31′ E., with an area of 1,899 square miles. It is bounded on the north-western corner by Purnea District and on the north-eastern by Dinājpur; Rājshāhi lies to the south-east, while the Ganges forms a continuous western and south-western boundary separating it from the Santāl Parganas and Murshidābād.

The Mahānandā flows through the District from north to south, dividing it into two nearly equal parts which present very different characteristics. West of the river the surface is composed of the newer alluvium and is comparatively low, a great deal of it having been subject to fluvial action in very recent times; the Ganges once washed the walls of Gaur, but it now flows 16 miles farther west. The eastern half of the District lies in the older alluvium of the Bārind, and has

a stiff clay soil and high undulating surface, broken by the deep valleys of the Tāngan and Pūrnabhabā and their tributary streams; towards the south in the Nawābganj *thāna*, as in other portions of the District bordering on the Ganges, the surface declines into the newer alluvium. The Ganges skirts the District, forming a natural boundary from the north-west corner to the extreme south. Its flood-waters, as deflected from the hills of Rājmahāl, are perpetually cutting away the Mālda bank, which is everywhere low and composed of loose sand. Among many former channels and deserted backwaters the little winding stream of the Bhāgīrathi (also called the Chhotī Bhāgīrathi) deserves mention, as being the historical river-bed which defended the city of Gaur. This is almost dry in the winter, but becomes navigable for country boats during the rainy season. It ultimately joins the Pāgla or Pāgli, a larger branch of the Ganges, which runs in a meandering course to the south-east, and encloses, before it regains the Ganges, a large island about 16 miles long. The Pāgla is navigable during the rains, but in the dry season it retains no current and becomes fordable at many points. The MAHĀNANDĀ enters Mālda from Purnea and joins the Ganges at the south-eastern corner of the District. Its tributaries are: on the right bank, the Kālindrī; and on the left bank, the Tāngan and Pūrnabhabā, which bring down the drainage of Dinājpur. The Mahānandā flows in a deep and well-defined channel between high banks, and varies in breadth from about 400 to 800 yards. At certain seasons of the year, the melting of the snows in the mountains, combined with the local rainfall, causes the river to rise as much as 30 feet, and an embankment has been constructed just above the civil station of English Bāzār to protect it from inundation. There are no lakes; but old channels of the Ganges are numerous, and between Gaur and the Mahānandā there are extensive undrained swamps.

Geology. The District is covered with alluvium. The Bārind belongs to an older alluvial formation, which is usually composed of massive argillaceous beds of a rather pale reddish-brown hue, often weathering yellowish, disseminated throughout which occur *kankar* and pisolitic ferruginous concretions. The low-lying country to the west of the Mahānandā and in the south is of more recent formation, consisting of sandy clay and sand along the course of the rivers, and of fine silt consolidating into clay in the flatter parts of the river plain.

Botany. Where the ground is not occupied by the usual crops of

North Bengal, it is covered with an abundant natural vegetation, except in the sandy beds of the greater rivers. Old river-beds, however, ponds and marshes, and streams with a sluggish current have a copious vegetation of *Vallisneria* and other plants. Land subject to inundation has usually a covering of *Tamarix* and reedy grasses, and in some parts where the ground is more or less marshy *Rosa involucrata* is plentiful. Few trees occur on these inundated lands; the most plentiful and the largest is *Barringtonia acutangula*. Near villages thickets or shrubberies of semi-spontaneous growth and more or less useful trees of a rapid growth and weedy character are common. No Government forests exist, but portions of the Bārind are covered with jungle known locally as *kātāl*. This consists chiefly of thorny bush-jungle, mixed with an abundance of *pīpal* (*Ficus religiosa*), banyan (*Ficus indica*), red cotton-tree (*Bombax malabaricum*), *pākar*-trees, and *nipal* bamboos.

Fauna. Mālda was once celebrated for its large game and especially for tigers. Owing, however, to the clearing of the *kātāl* jungle and to the extension of cultivation, tigers are now rarely met with, though leopards still abound and frequently make their appearance even in the outskirts of English Bāzār. Wild hog and spotted deer are also common, and wild buffaloes are occasionally seen, though they have become very rare. The swamps and ancient tanks of the District are infested with big crocodiles; and the larger swamps are frequented by game-birds of almost every species found in Bengal.

Temperature and rainfall. The climate is not characterized by extremes of heat or rainfall. Mean temperature increases from 63° in January to 86° in May, the average for the year being 78°. The highest mean maximum is 97° in April and the lowest 50° in January. The annual rainfall averages 57 inches, of which 4·7 inches fall in May, 9·7 in June, 13·4 in July, 11·2 in August and September, and 3·4 in October.

Natural calamities. Except in August, 1885, when an exceptional rising of the Ganges caused great destruction of crops over about 300 square miles in the south and south-west of the District, no serious flood has occurred in recent years. In the earthquake of 1897 all the masonry houses in English Bāzār and Old Mālda were damaged, the cost of repairs to public buildings being estimated at Rs. 11,000, while private buildings suffered to the extent of 2½ lakhs. In the *diāra* lands cracks opened some half a mile in length, and in the higher lands subsidences occurred in a few places.

History. The area included within Mālda District contains two of the great capitals of the early Muhammadan rulers of Bengal; and at the present day the sites of GAUR and PANDUA exhibit some of the most interesting remains in the Province. The country originally formed part of the kingdom of Pundra or Paundravardhana, the country of the Pods, and subsequently of the Bārendra division of Bengal under Ballāl Sen. To this king is attributed the building of the city of Gaur, which under his son Lakshman Sen received the name of Lakshmanavatī or Lakhnautī. Muhammad-i-Bakhtyār Khiljī, who invaded Bengal at the end of the twelfth century, expelled Lakshman Sen and moved the capital from Nadiā to Gaur. About 1350 Shams-ud-dīn Ilyās transferred the capital to Pandua, where it remained for about 70 years till Jalāl-ud-dīn restored it to Gaur; but with this exception Gaur continued, in spite of many vicissitudes, to be the capital of the viceroys and kings of Bengal till 1564, when Sulaimān Kararānī removed the seat of government to TANDA, a few miles to the south-west of Gaur. Munim Khān, after defeating Daud Khān in 1575, occupied Gaur; but a pestilence broke out in which thousands died every day, and the survivors fled, never to return to their deserted homes. After this Tanda apparently continued to be the capital, but a few years later Rājmahāl was made the seat of government. The very site of Tanda is now unknown, though it seems to have been an important place for about a hundred years after the depopulation of Gaur; in its neighbourhood was fought the decisive battle in which prince Shujā was defeated by the generals of Aurangzeb in 1660.

The East India Company established a factory at Mālda as early as 1676, by the side of a Dutch factory already in existence there. In 1683, when it was visited by William Hedges (who spent a day in exploring the ruins of Gaur), the number of factors was three[1]. In 1770 English Bāzār was fixed upon for a Commercial Residency, and continued to be a place of importance until the discontinuance of the Company's private trade; the fortified structure which was originally used as the Residency is now occupied by the courts and public offices.

As an administrative unit the District only came into existence in 1813, when, in order to secure a closer magisterial supervision, various police circles were detached from the Districts of Rājshāhi, Dinājpur, and Purnea and placed in charge of a Joint-Magistrate and Deputy-Collector stationed at English Bāzār. A separate treasury was first opened in 1832, but it

[1] *Hedges's Diary*, vol. i, pp. 87-9.

was not till 1859 that a Magistrate-Collector was appointed to the District. Anomalies remained in the revenue, criminal, and civil jurisdiction which were not adjusted till 1875, and since that time there have been only a few unimportant transfers of jurisdiction. In 1905 the District was transferred from the Bhāgalpur Division of Bengal to the Rājshāhi Division of Eastern Bengal and Assam.

Mālda is considered less unhealthy than the adjoining Districts of Purnea, Dinājpur, and Rājshāhi; but it is very malarious, especially in the undrained swamps between Gaur and the Mahānandā, and in the jungly tract toward the east. Malarial fever generally breaks out on the cessation of the rains. In six years out of the ten ending 1900 Mālda was one of the six Districts in Bengal from which the highest fever mortality was reported; in 1899 it headed the list with a recorded mortality from fever of 41·7 per 1,000. Cholera is often rife, and a specially bad outbreak occurred in 1899 in English Bāzār. The people.

The population has risen from 677,328 in 1872 to 711,487 in 1881, 814,919 in 1891, and 884,030 in 1901. It is thus growing rapidly in spite of the unhealthy conditions prevailing, and the density in 1901 was 466 persons per square mile. The increase during the decade ending with that year amounted to 8½ per cent., being greatest in the Gājol and Old Mālda *thānas* in the Bārind, where Santāls are settling in large numbers; this tract is still, however, the least densely populated part of the District. In the Kāliāchak and Sibganj *thānas* in the south-west new *chars* have attracted a number of Muhammadan cultivators from English Bāzār and Nawābganj, and from Murshidābād on the other side of the river. The immigrants from the Santāl Parganas now number 43,000; and there is also a considerable immigration from Bhāgalpur and other Bihār Districts, and from the United Provinces. The population is contained in 3,555 villages and three towns: ENGLISH BĀZĀR, the head-quarters, MĀLDA, and NAWĀBGANJ. Bengali is spoken by 74 per cent. of the population and Bihārī by 21 per cent.; the Mahānandā river forms a linguistic boundary, the northern dialect of Bengali being prevalent in the east of the District, while in the west the Māgadhī dialect of Bihārī is the vernacular. The Mahānandā is likewise a religious boundary; and the two main religions are nearly equally divided, Hindus (440,398) constituting 50 per cent. of the population and Muhammadans (424,969) 48 per cent.

Of the Muhammadans, no less than 399,000 are Shaikhs;

astes and ccupa- ons. they are probably for the most part descended from the Rājbansis or Koch, who form the prevailing race of North Bengal east of the Mahānandā, and are the most numerous of the Hindu castes in the District (64,000). Santāls (including 18,000 returned as Animists) number 52,000, Chains (who are semi-Hinduized aborigines) 44,000, and Chāsatis 27,000; while among the less numerous castes, Gangai (Ganesh) with 13,000 and Pundāri (Puro) with 8,000 are distinctive of this part of the country. Agriculture supports 57 per cent. of the population, industries 19 per cent., and the professions one per cent.

hristian issions. The only Christian mission at work in the District belongs to the London Baptist Missionary Society; it has met with but little success, the number of native Christians in 1901 being 173.

eneral gricul- ural con- itions. The low-lying recent alluvium in the west and south is enriched by annual deposits of silt, and its fertile soil is well adapted for the cultivation of rice, mulberry, indigo, and mangoes. The stiff clay soil of the Bārind, which is best suited to the growth of winter rice, produces also large crops of pulses and oilseeds. The north and north-west corner of the District lying between the Mahānandā, the Kālindrī, and the Ganges is intersected by nullahs and covered with jungle; the soil here is extremely poor, but the short grass affords pasturage to a considerable number of cattle.

hief agri- ltural atistics d princi- l crops. In 1903-4 the net cropped area was estimated at 1,120 square miles and the cultivable waste at 455 square miles; about 7 per cent. of the net cultivated area is twice cropped. Rice constitutes the staple food-crop, being grown on 611 square miles, of which 312 square miles are estimated to be under the winter crop, while on most of the remainder early rice is grown. Wheat covers 119 square miles, barley 34 square miles, maize 25 square miles, pulses (including gram) and other food-grains 153 square miles, oilseeds (chiefly mustard) 105 square miles, and jute 38 square miles. Jute is grown for the most part in the north-west of the District, and wheat, barley, and gram in the extreme west. Mangoes, for the excellence and variety of which Mālda is deservedly famous, are grown chiefly in the English Bāzār *thāna*. But the profits from the sale of this fruit, as well as the improved facilities for transport, have encouraged landowners to cultivate it in all the *thānas* to the west of the Mahānandā. Every plot of land suitable for the growth of mango grafts is planted with them, and tracts of land formerly growing ordinary *rabi* or

winter crops have in recent years been converted into mango orchards. The mulberry is grown in the central and south-western portion of the District; and its cultivation gives a curious aspect to this part of the country, as the land has to be artificially raised to the height of 8 or 10 feet, to prevent the plants from being destroyed by the annual floods. Indigo is still grown on the Ganges *diāras* to the west, covering about 1,000 acres, but the area under this crop has been largely reduced.

Improvements in agricultural practice.

Cultivation has rapidly extended around the ruins of Gaur and also in the Bārind, where the greater portion of the cultivable area has been cleared of jungles in recent years; and there has also been an extension of cultivation in the swampy tract to the east of Gaur. Manure is used only on mulberry lands, and artificial irrigation is unnecessary except for the spring rice crop. The agricultural classes are on the whole prosperous, and there has hitherto been little demand for advances under the Agriculturists' and Land Improvement Loans Acts.

Cattle.

Good cart-bullocks are imported from the Districts to the west, but the local cattle are poor. There are extensive tracts of waste land in the Bārind and elsewhere, but little nourishing pasture land. During the rains the inhabitants of the *diāras* graze their cattle in the higher tracts. An industrial exhibition, at which domestic animals and poultry are shown, was instituted at English Bāzār in 1903.

Arts and manufactures.

The staple industry of the District is silk. Its production may be classed in three branches: the rearing of the cocoons, the spinning of the raw silk, and the weaving of silk piece-goods. Within the last twenty-five years the cultivation of mulberry and the production of cocoons has nearly doubled; and the annual output of cocoons is estimated at 100,000 maunds, worth from 25 to 30 lakhs, of which about 60,000 maunds are exported. The annual export of silk thread is estimated at 1,650 to 1,700 maunds, and its value at 10 or 11 lakhs. The industry is said to date back to the Hindu kingdom of Gaur; and the cloth known as Māldahi was for a long time a speciality of external commerce, but its manufacture is now very limited, and only a few pieces are occasionally woven to meet the demands of a Bombay firm. The export of ordinary silk piece-goods has also decreased, and it is estimated that it does not now exceed Rs. 60,000. The East India Company had a factory at Mālda as early as 1676, and in 1876 there were seven European concerns for the manufacture of raw silk;

but there are now only two factories under European management, at Bāragharia and Bholā Hāt, and the number of native factories has also declined. In 1903-4 the European factories turned out 23,000 lb. of raw silk, valued at 2·1 lakhs, which was exported chiefly to England and France; they also purchase and export large quantities of cocoons. Some cotton cloth is woven; but the only other important industry is the manufacture of brass-ware and bell-metal at English Bāzār, Nawābganj, and Kālīgrām. The manufacture of indigo is languishing, and the out-turn in 1903-4 was only 4 tons.

Commerce. The chief exports are silk cocoons, silk thread, paddy and rice to Calcutta, Dacca, Assam, and Bihār, mangoes (chiefly to Calcutta and Eastern Bengal) and jute (to Calcutta, Murshidābād, Nāgpur, Benares, Meerut, and Lahore), while wheat, barley, gram, oilseeds, and chillies are also exported. The imports comprise cotton piece-goods, coco-nuts, betel-nuts, paper, *ghī*, *gur* (molasses), sugar, copper, brass plates, kerosene oil, shoes, umbrellas, and spices of all kinds. Coco-nuts and betel-nuts are brought from Lower Bengal, *ghī* and *gur* from Bihār, and the other articles mainly from Calcutta. A large part of the traffic is carried in country boats down the Mahānandā; while some of the trade is carried by boat or river steamer to Rājmahāl on the East Indian Railway, or to Dāmukdia Ghāt on the Eastern Bengal State Railway. The chief mart for the purchase and sale of silk cocoons and silk thread is AMĀNIGANJ HĀT, the sales on a market day occasionally amounting to a lakh. The most important centre of trade is NAWĀBGANJ on the Mahānandā, while Mālda town and ROHANPUR have also an important rice trade.

Railways and roads. No railway at present enters the District, but there is a project to construct a branch line from Katihār to Sārā Ghāt or to Godāgāri (to connect with an extension of the Rānāghāt-Murshidābād branch of the Eastern Bengal State Railway recently opened to traffic). Excluding 424 miles of village tracks, there are only 277 miles of roads, of which 9 miles are metalled. The most important are those from English Bāzār to Nawābganj and to Rājmahāl, and the Dinājpur road branching off from the latter; the road from Godāgāri to Dinājpur passes through the south-eastern corner of the District. There are 32 ferries under the District board. The paucity of roads is due to the excellence of water communications.

Water communications. The Mahānandā is navigable throughout the year by boats of 150 maunds up to Alal, the Tāngan for boats of 100 maunds up to Lālgola, and the Pūrnabhabā for boats of the same

burden as far as Dinājpur. Steamers belonging to the India General Steam Navigation Company ply six days a week between English Bāzār and Sultānganj; a service between Rājmahāl and Dāmukdia Ghāt stops at various stations on the Mālda side of the Ganges, and during the rains a ferry steamer runs from Rājmahāl to English Bāzār and back three days a week.

Famine.

Some scarcity in 1885 and 1897 necessitated Government relief on a small scale, but no actual famine has occurred in recent years.

Administration.

The Magistrate-Collector is assisted at English Bāzār, the head-quarters, by a staff of three Deputy-Collectors and one Sub-Deputy-Collector. There are no subdivisions in the District.

Civil and criminal justice.

The civil courts subordinate to the District Judge are those of three Munsifs, of whom two sit at English Bāzār and one at Nawābganj. The District and Sessions Judge, who is also Judge of Rājshāhi, has his head-quarters at Rāmpur Boāliā in that District. Crime is on the whole light, and the commonest offences are of a petty character or are due to disputes about land.

Land revenue.

The District, as already stated, is a recent creation from the Districts of Purnea and Dinājpur, and its land revenue history cannot be stated separately. In 1903–4 there were 655 estates, with a revenue demand of 4·36 lakhs. The whole of the District is permanently settled, with the exception of 40 estates with a total demand of Rs. 35,000, which are temporarily settled or managed direct by Government. Little is peculiar in the land tenures of the District, except the existence of several large revenue-free estates granted as endowments to Muhammadan *fakīrs*. Under the *hālhāsili* tenure the annual rent varies both according to the amount of land under cultivation and the nature of the crop raised. This tenure is most common in the backward parts of the District, and one of its incidents is that it allows a certain proportion of the village lands always to lie fallow. Rent rates vary largely for different kinds of land, being usually much lower in the case of old holdings. Land yielding two or three crops brings in about Rs. 1–14 per acre in the case of old holdings, and from Rs. 3 to Rs. 4–8 per acre in the case of land newly brought under cultivation. Low lands for winter rice yield from about Rs. 1–8 to Rs. 2–4 per acre; spring rice lands from Rs. 3–12 to Rs. 6 and Rs. 12, and occasionally even Rs. 18 and Rs. 24 per acre; mulberry lands from Rs. 3 to Rs. 3–12 for unraised land and

from Rs. 4–8 to Rs. 6 for well-raised plots; mango orchards from Rs. 4–8 to Rs. 6; and garden lands from Rs. 6 to Rs. 15 per acre. The average holding of a tenant, as estimated from certain typical estates in various parts of the District, is 1½ acres.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue	4,15	4,29	4,40	4,40
Total revenue	6,69	7,69	8,80	9,08

Local and municipal government.

Outside the municipalities of ENGLISH BĀZĀR, OLD MĀLDA, and NAWĀBGANJ, local affairs are managed by the District board. In 1903–4 its income was Rs. 87,000, of which Rs. 32,000 was derived from rates; and the expenditure was Rs. 96,000, including Rs. 53,000 spent on public works and Rs. 25,000 on education.

Public works.

English Bāzār is protected by an embankment, 2½ miles in length, from the inundations of the Mahānandā and Kālindrī rivers.

Police and jails.

The District contains ten *thānas* or police stations and three outposts. In 1903 the force subordinate to the District Superintendent consisted of 2 inspectors, 26 sub-inspectors, 20 head constables, and 255 constables. There was, in addition, a rural police force of 178 *daffadārs* and 1,784 *chaukīdārs*. The District jail at English Bāzār has accommodation for 110 prisoners.

Education.

Education is backward; in 1901 only 3·7 per cent. of the population (7·4 males and 0·2 females) could read and write. An advance has, however, been made in recent years, the number of pupils under instruction having increased from 8,608 in 1883–4 to 11,752 in 1892–3 and 12,009 in 1900–1. In 1903–4, 14,782 boys and 1,085 girls were at school, being respectively 22·5 and 1·6 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 487, including 27 secondary and 444 primary schools. The expenditure on education was Rs. 76,000, of which Rs. 9,000 was met from Provincial funds, Rs. 23,000 from District funds, Rs. 1,100 from municipal funds, and Rs. 35,000 from fees.

Medical.

In 1903 the District contained nine dispensaries, of which one had accommodation for 28 in-patients. The cases of

56,000 out-patients and 500 in-patients were treated, and 2,419 operations were performed. The expenditure was Rs. 15,000, of which Rs. 800 was met from Government contributions, Rs. 5,000 from Local and Rs. 2,000 from municipal funds, and Rs. 7,000 from subscriptions.

Vaccination is compulsory only in municipal areas. In 1903–4 the number of persons successfully vaccinated was 30,000, representing 35 per 1,000 of the population. Vaccination.

[Martin, *Eastern India* (1838), vol. ii, pp. 291–582, and vol. iii, pp. 1–350; Sir W. W. Hunter, *Statistical Account of Bengal*, vol. vii (1876); N. G. Mukerjī, *Monograph on the Silk Fabrics of Bengal* (Calcutta, 1903).]

Amāniganj Hāt.—Important silk mart in Mālda District, Eastern Bengal and Assam. Amāniganj possesses no resident population, but traders come here from the neighbouring Districts of Murshidābād and Rājshāhi to buy mulberry silk cocoons and wound and raw silk. In the busy season the sales on a single market-day occasionally amount to a lakh, falling in the dull season to Rs. 8,000 or Rs. 10,000. The rates for cocoons for each breeding season are fixed here for the whole District.

English Bāzār.—Head-quarters of Mālda District, Eastern Bengal and Assam, consisting of a series of trading villages lining the right bank of the Mahānandā, situated in 25° 0′ N. and 88° 9′ E. Population (1901), 13,667. Being an open elevated site on the river bank in a mulberry-growing country, it was chosen in 1676 as the site of one of the Company's silk factories. The Dutch and the French also had settlements here, and the residence of the Civil Surgeon was formerly a Dutch convent. The East India Company's factory was of considerable importance during the last quarter of the seventeenth century, and its 'Diaries and Consultations' from 1685 to 1693 are preserved in the India Office under the title of 'Maulda and Englesavade.' The town is still known as Angrezābād. In 1770 English Bāzār was fixed upon for a Commercial Residency, and retained its importance until the discontinuance of the Company's private trade. An extensive trade in grain is now carried on. English Bāzār was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 16,000, and the expenditure Rs. 15,000. In 1903–4 the income was Rs. 19,000, of which Rs. 5,000 was derived from a tax on persons (or property tax), and Rs. 4,000 from a conservancy rate; and the expenditure was Rs. 16,000. The largest building is the

public *kacheri* or courthouse, the former Commercial Residency, which is regularly fortified, and within its walls are all the public offices. The District jail has accommodation for 110 prisoners. A small embankment protects the place from the inundations of the Mahānandā.

Gaur.—Ruined city and ancient capital in Mālda District, Eastern Bengal and Assam, situated in 24° 54′ N. and 88° 8′ E., on a deserted channel of the Ganges. The date of the foundation of the city is involved in obscurity, and the whole course of its history down to the day when it was finally deserted is only to be conjectured. It is known, however, that it was the metropolis of Bengal under its Hindu kings; and local traditions connect some of its ruins with the names of Ballāl Sen and Lakshman Sen, from the last of whom it took the name Lakshmanavatī or Lakhnautī. The name Gaur is also of great antiquity, but was more strictly applicable to the kingdom (called Gauriyā Bangālā) than to the city. It is, according to Cunningham, derived from *gur*, the common name for molasses or raw sugar, for which this country has always been famous, the city being, in all probability, the great export mart for all the northern Districts in the days when the Ganges flowed past it. The recorded history of Gaur begins with its conquest in 1198 by the Muhammadans, who retained it as the chief seat of their power in Bengal for more than three centuries, and erected numerous mosques and other buildings, a few of which yet remain in a tolerable state of preservation. After the Afghān kings of Bengal established their independence, they founded about 1350 another capital, called Fīrozābād, at PANDUA, which appears to have been the seat of government till the capital was again transferred to Gaur by Jalāl-ud-dīn Muhammad Shāh seventy years later. From that time, the royal residence remained at Gaur, which was known by various names, such as Jannatābād, or the 'abode of paradise,' Fatehābād, Husainābād, and Nusratābād, the first name being given to it by Humāyūn during his residence here in 1538. After the conquest of Bengal by Sher Shāh in 1539, the seat of government was again removed to TANDA or Tānrā, a few miles south-west of Gaur, on the bank of the then main channel of the Ganges, which was gradually receding westwards; and shortly afterwards Gaur was depopulated by pestilence when Munim Khān, after defeating Daud Shāh, the last of the Afghān dynasty, who had denied the suzerainty of the emperor Akbar, proceeded here with his army during the rainy season of 1575. Thou-

sands of the troops and inhabitants died daily; the people were unable to bury or burn the dead; and the corpses of Hindus and Musalmāns alike were thrown into the marshes and tanks, and into the adjoining Bhāgīrathi river. The few people that survived the plague left the city; and the imperial general, who had resolved to maintain Gaur as the seat of the government and to restore its former magnificence, himself fell a victim to the general contagion. Gaur was never again populated to any extent, although various additions were made to its buildings from time to time, such as the Lukāchuri, or eastern gate of the fort, which was erected by prince Shujā in 1650. This prince was a disciple of Niāmat-ullah-Walī, a saint who lived in Fīrozpur, the southern suburb of Gaur, where his tomb still exists; and though his capital was at Rājmahāl, he appears to have spent some time in this city.

The final desertion of Gaur dates from the time when the Mughal viceroys removed the seat of government to Dacca and Murshidābād; but as late as 1683, when William Hedges visited the place, the palace and most of the buildings were fairly intact. The greatest damage done to the ruins has, however, been due to human agency. They have been a quarry not only for the brick houses of the neighbouring towns and villages, but also for the mosques, palaces, and public monuments of Murshidābād; and the towns of Old Mālda and English Bāzār have been constructed almost entirely with bricks from Gaur. Mr. Reuben Burrow, who visited the ruins in the year 1787, wrote as follows:—

'These tombs were not long ago in perfect order and were held in a manner sacred, till they were torn to pieces for the sake of stone; indeed such of the gates as happened to have no stone in them are almost perfect; but wherever a piece of stone happened to be placed, the most elegant buildings have been destroyed to get it out, so that there is now scarce a piece left except a part in the round tower, which happens to have been preserved by the peculiar construction of the building.'

Mr. Creighton, who was in charge of the indigo factory at Gomalti towards the end of the eighteenth century, wrote:—

'Rājmahāl, Mālda, and Murshidābād for centuries have been supplied from hence with materials for building, and bricks and stones are continually carried away to other parts of the country on carts, bullocks, and in boats by the natives for the purpose of modern edifices.'

According to Grant, the *Nizāmat Daftar* received Rs. 800 annually from two local *zamīndārs* as a fee for the privilege of

demolishing the venerable ruins, and stripping from them their highly-prized enamelled tiles and the so-called 'Gaur marble.' During the last fifty years, however, extensive clearances of jungle have been effected, and the wanton destruction of the buildings has been stopped; but the damage already done is unfortunately irreparable. Dr. Buchanan Hamilton, who visited Gaur in 1810, has left an elaborate description of the ruins as they then appeared, from which the following account is mainly condensed. It must be remembered, however, that their dilapidation rapidly advanced since that time till within a few years ago, when it was stopped by Government.

The city with its suburbs covered an area variously estimated at from 22 to 30 square miles; and the dimensions of the city proper were about 7½ miles in length from north to south, and from 1 to 2 miles in breadth, giving a total area of about 13 square miles. The west side of the city was throughout washed by the main stream of the Ganges, the eastern side being protected partly by the Mahānandā and partly by a line of perennial swamps, representing a former channel of the Ganges. To the south but little protection was needed, for the junction of the Mahānandā and the Ganges a little lower down would have prevented an invader from choosing such a circumscribed base of operations. To the north, which was the most accessible quarter, an artificial bulwark was required; and this was afforded by a line of fortifications about 6 miles in length, extending in an irregular curve from the old channel of the Bhāgīrathi at Sonātalā to near the Mahānandā at Bholā Hāt. This rampart, which was mainly composed of earth, was about 100 feet wide at its base. At the north-east part of the curve was a gate protected by a strong projecting outwork in the form of a quadrant, through which a high embanked road passed north and south.

North of the rampart was the site of the ruins of the palace where Ballāl Sen is said to have resided, consisting, like the palace at RĀMPAL in Dacca District, of a square of about 400 yards surrounded by a ditch. No trace, however, can now be found of these ruins, which were still extant in the time of Buchanan Hamilton. Behind the rampart was the northern suburb of the city. It was of vast extent, in the shape of a quadrant of a circle, with an area of about 6,000 square yards. The eastern portion is now occupied by marshes, but the western portion near the Bhāgīrathi is enclosed by earthworks and contains the remains of many

public buildings. Here is situated the Sāgardīghi, the most celebrated artificial piece of water in Bengal, which was formed by deepening and embanking natural hollows existing in the high clay lands. Its dimensions are nearly 1,600 yards from north to south and more than 800 yards from east to west. The banks are occupied by Muhammadan buildings, of which the most conspicuous is the tomb of Makhdūm Shaikh Akhi Sirāj, one of the saints of Gaur, who came here from Delhi and died in 1357. In the neighbourhood are the two most frequented places of Hindu pilgrimage in the District: namely, Sādullahpur *ghāt* and the Duārbāsinī shrine. The *ghāt*, which formed the chief descent to the old bed of the Ganges, is said to have been the only burning *ghāt* which the Muhammadan rulers allowed their Hindu subjects to use, and dead bodies of Hindus are still brought here from great distances to be burned.

Immediately to the south lies the city itself, which towards each suburb and along the Ganges was defended by a strong rampart and a ditch. On the side facing the Mahānandā the rampart was doubled, and in most parts there were two, and in some parts three, immense ditches. These works were designed for embankments against inundation, and were utilized as drains and as fortifications, the double embankment having, apparently, been constructed to prevent the Ganges from cutting away the site of Gaur, when the main body of its water began to gravitate westwards in the early part of the sixteenth century. The encroachments of the river were successfully checked by these works, combined with the hardness of the clay of the high lands on which Gaur was built; and the Ganges cut fresh channels west of the embanked city, instead of sweeping it away. The base of the outer embankment was measured in one place by Mr. Creighton and found to be 150 feet thick. By far the greater portion of the city appears to have been densely inhabited. Broad roads from east to west traversed the northern portion at irregular intervals; and there were also water channels affording easy communication between different parts of the city, as well as a regular system of drainage for carrying off the rain-water to the large natural and artificial reservoirs. Somewhat to the south, on the banks of the Bhāgīrathi, was the citadel or *kila*, a work evidently of the Muhammadan period, extending in the form of an irregular pentagon about a mile in length from north to south and about 600 to 800 yards broad. The rampart which encircled this was strongly built of earth and brick, with many

flanking angles and bastions. The main entrance was to the north through a noble gate called the Dākhil Darwaza, the erection of which is ascribed to Bārbak Shāh (1459–74). The palace at the south-east corner of the citadel was surrounded by a wall of brick, 66 feet high and 18 feet broad at the base and 8½ feet at the top; only a portion of this wall, which is called the Baisgazī wall or Ghordaur ('racecourse'), is still standing. In the interior the remains of several cross-walls are visible, but the arrangement of the apartments cannot be ascertained. A little north of the palace were the royal tombs, where Alā-ud-dīn Husain and other independent kings of Bengal were buried; but these have now entirely disappeared. Within the citadel close to the Lukāchuri Gate is the Kadam Rasūl mosque, erected in 1530 over a stone bearing the impression of Muhammad's foot. It is still used as a place of worship, and is consequently in fairly good preservation. Near it is the Chikkā mosque, so called from the number of bats infesting its interior, which, according to some traditions, was used not as a mosque but as a courthouse or a prison. Just outside the east wall of the citadel stands a lofty tower known as the Fīroz Minār. Local tradition ascribes this tower to the reign of Alā-ud-dīn Husain Shāh; and a plausible hypothesis is that Fīroz Minār is a translation of the Sanskrit *Jai Stambha*, or 'tower of victory,' and that it was erected by Husain Shāh after the conquest of Assam. According to some writers, it was built by Saif-ud-dīn Fīroz. Farther away along the eastern wall of the citadel stand the Tāntipāra and Lotan mosques, both of which date from 1475–80. The former is famous for its moulded brickwork. The latter, which consists of a single chamber 34 feet square, with a corridor in front 34 feet by 11 feet, is the only building with glazed tiles which has escaped the vandal despoilers of previous generations. The name Lotan has been explained as a corruption of *natin* or 'dancing-girl,' the tradition being that the mosque was erected by a woman of that profession.

About a mile and a half north of the citadel is a plot of land of 600 square yards surrounded by a rampart and a ditch, known as the Flower Garden. South-east of this is the Piyāsbāri, or 'abode of thirst,' a tank of considerable dimensions. It is said to have formerly contained brackish water, and tradition relates that condemned criminals were allowed to drink nothing but the water from this tank, and thus perished of thirst. Between the Piyāsbāri and the citadel is the Great Golden mosque, generally known as the Baradarwāzī

of Rāmkel, which is 180 feet from north to south, 60 feet from east to west, and 20 feet high to the top of the cornice; it was formerly covered with 33 domes, and was built by Nusrat Shāh in 1526. Another structure of considerable interest was the fine central gate in the south wall of the city, which fell to pieces in the earthquake of 1897. It was called the Kotwālī Darwāzā, presumably from the circumstance that the superintendent of police was stationed here.

Southwards from this gate stretches an immense suburb called Fīrozpur. It extends as far as Pukhariyā, a distance of about 7 miles, though its width is comparatively small, and it bears abundant traces of having been at one time densely populated. Towards the east and south lay an embankment and a ditch, probably designed to ward off the floods, which have now formed long marshes in that direction. The most prominent building in this suburb is the Golden or Eunuch's mosque, erected during the reign of Husain Shāh, which is called the Small Golden mosque to distinguish it from that mentioned above. It has some very fine carvings and is the best preserved mosque with stone facings at Gaur. Another monument of some interest is the tomb of Niāmat-ullah-Walī, the spiritual guide of prince Shujā, which is to this day carefully tended by his descendants.

Government has since 1900 taken steps for the preservation of certain of the more interesting or prominent buildings: namely, the Fīroz Minār, the Kadam Rasūl mosque, the Great Golden mosque, and the Small Golden mosque; the tomb of Fateh Khān (said to have been a son of Dilāwar Khān, a general of Aurangzeb), situated outside the enclosure of the Kadam Rasūl; the east gate of the fort, called Lukāchuri, which was built by prince Shujā when he temporarily endeavoured to revive the city long after its desertion; the Chikkā mosque near the palace; the Dākhil Gate, forming the northern entrance to the fort; the Tāntipāra mosque; and the Lotan mosque.

[Martin, *Eastern India*, vol. iii (1838); G. H. Ravenshaw, *Gaur, its Ruins and Inscriptions* (1878); A. Cunningham, *Archaeological Survey Reports*, vol. xv, pp. 39–94; *Reports of the Archaeological Surveyor, Bengal Circle* (1900–1, 1902–3, and 1903–4); and *Archaeological Survey of India, Annual Report* (1902–3), pp. 51–5.]

Mālda Town (or Old Mālda).—Town in Mālda District, Eastern Bengal and Assam, situated in 25° 2′ N. and 88° 8′ E., at the confluence of the Kālindrī with the Mahānandā. Popu-

lation (1901), 3,743. The town is admirably situated for river traffic, and probably rose to prosperity as the port of PANDUA. During the eighteenth century it was the seat of thriving cotton and silk manufactures, and both the French and Dutch had factories here. In 1810 Mālda was already beginning to lose its prosperity; and, though some trade is still carried on in grain, it shows signs of poverty and decay. Mālda was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 3,450, and the expenditure Rs. 3,300. In 1903–4 the income was Rs. 3,400, mainly from a tax on persons (or property tax); and the expenditure was Rs. 3,000. The town contains a mosque built in 1566. At Nimāsarai, near the confluence of the Mahānandā and Kālindrī, stands an old brick tower with stones shaped like elephant tusks projecting from its walls. It resembles the Hiran Minār at Fatehpur Sīkri, and was probably intended for a hunting tower.

Nawābganj (or Bāragharia Nawābganj).—Town in Mālda District, Eastern Bengal and Assam, situated in 24° 36′ N. and 88° 17′ E., on the Mahānandā, a little above its junction with the Ganges. Population (1901), 17,016. A steamer service plying from Godāgāri to English Bāzār calls here, and it is the seat of a brisk trade. It is the most populous town in the District, and was constituted a municipality in 1903. In 1904–5 the municipal income was Rs. 6,600, mainly from a tax on persons (or property tax); and the expenditure was Rs. 4,900.

Pandua (also called Paruah or Peruah).—Deserted town in Mālda District, Eastern Bengal and Assam, situated in 25° 8′ N. and 88° 10′ E., at a distance of 9 miles from Old Mālda, and about 20 miles from Gaur, in a north-easterly direction from both. It is called Hazrat Pandua, to distinguish it from another place of the same name in Hooghly District. Although less noteworthy than Gaur, it contains some remarkable specimens of early Muhammadan architecture; but these, like the ruins of Gaur, lay for a long time buried in almost impenetrable jungle, in which tigers and other wild animals had their lairs, till the recent clearances of the jungle made by new settlements of Santāl colonies. According to Sir William Hunter, Pandua was probably originally an outpost forming one of the many defences of the more ancient city of Gaur, and guarding the road from the north from the incursions of Koch and Rājbansis. It is more likely, however, that Pandua was older than Gaur, and that it occupied the site of Paundra-

vardhana[1], the capital of the early Hindu kingdom of that name. Traces of extensive remains of ancient date may still be seen south of the Muhammadan city of Pandua, which probably mark the site of an older town; while the numerous stones with mediaeval Hindu carvings that were used in building the Adīna Masjid were evidently stripped from Hindu temples formerly standing close by.

The fortified city of Pandua, the suburbs of which reached to Mālda town, extended within the ramparts for 6 miles[2] due north, some 4 miles to the east of the Mahānandā river, and running nearly parallel to it. Mālda town was the fortified river port south of the city at the junction of the Kālindrī and the Mahānandā, while the suburb of Rai Khān Dīghi was a similar fortified port on the Mahānandā 10 miles north of Mālda town. The port of Rai Khān Dīghi also guarded the bridge over the Mahānandā at Pīrganj on the great military road. As Pandua increased in wealth and importance, its fortifications were extended, and it was further strengthened by an outpost at Ekdāla, some 20 miles to the north within the modern District of Dinājpur.

The recorded history of Pandua dates from about 1350, when Shams-ud-dīn Ilyās Shāh, one of the first independent kings of Bengal, is said to have transferred his capital temporarily from Gaur to Pandua. It has been supposed that this king and his successors, who with difficulty repelled the Delhi emperor, were influenced in their desertion of Gaur by a strategic reason, as Pandua was not accessible by water, and was probably then as now protected by almost impenetrable jungles. However this may be, it does not appear that Gaur was entirely abandoned, as the two cities seem to have existed side by side, although Pandua continued to be the chief seat of government for about seventy years (1350–1420). Its court name was Fīrozābād, which during this period regularly makes its appearance on the coins, whereas that of Lakhnautī (Gaur) disappears. About 1420, in the reign of Jalāl-ud-dīn, the son of the Hindu Rājā Kāns, the royal residence was again transferred to Gaur; but it is probable that, though its name is not again mentioned in history, Pandua maintained its splendour

[1] In Wilson's *Vishnu Purāna* (vol. ii, p. 170, footnote), Pundra is said to be a man of mixed caste whose business it was to boil sugar; and it is suggested that this caste, which possibly survives in the Pundāris or Puros, a caste still existing in the neighbourhood, and now chiefly employed in reeling cocoons, gave its name to the kingdom of Pundra (see the similar derivation suggested by General Cunningham for Gaur).

[2] Cunningham estimates this length as less than 4 miles.

for some time and was a favourite country resort of the Bengal kings.

A road paved with brick from 12 to 15 feet wide seems to have passed through the entire length of the town. From the heaps of bricks on both sides it would appear to have been a regular street lined with brick houses, of which the foundations can still be traced in many places. Near the middle is a bridge of three arches, partly constructed of stone; it is rudely built and of no great size. At the northern end of the street are evident traces of a rampart, the passage through which is called Garhduār or the 'gate of the fortress.' At the south end many foundations can be traced, which also probably belonged to a gate. Dr. Buchanan-Hamilton was of opinion that the city extended only a little way either east or west from the main street, but that a scattered suburb reached in a southerly direction as far as Mālda. Entering Pandua, the first buildings met with are those known as the Bais-hazārī and Chheh-hazārī, or the establishments of 22,000 and 6,000 *bīghas*. The former belonged to the famous saint Jalāl-ud-dīn Tabrīzī, who came to Bengal from Persia and died in 1244; and the latter contains the tomb of Mīr Kutb Alam and that of his father Ata-ul-hakk. This saint played an important part during the rebellion of the Hindu *zamīndār* Rājā Kāns and died in 1415. South-east of Chheh-hazārī stands the Eklākhi monument, a mausoleum erected over the tombs of Jalāl-ud-dīn Muhammad Shāh, the son of Rājā Kāns, who died about 1430, and of his wife and son. East of this is the Golden mosque, sometimes called the Kutbshāhi mosque from the name of its builder, which was constructed between 1583 and 1585.

By far the most famous, however, of all the Muhammadan remains at Gaur and Pandua is the great Adīna Masjid, which stands one mile north of the last group of ruins. It was built by Sikandar Shāh, and completed in either 1369 or 1374, and is said to be a copy of the Jāma Masjid at Damascus. In its present state, it is a large mass of ruins, and it has been found possible to preserve only the Bādshāh kā Takht, or *zanāna* apartment, and the bays and arches around it. One mile east of the mosque are the remains of the old palace of Pandua, called the Sātaisgarh; they consist of a number of tanks with galleries and baths around them and a few ruined houses.

Government has recently taken steps for the conservation of the Adīna Masjid, the Eklākhi monument, and the Golden mosque.

[Martin, *Eastern India*, vol. ii (1838); G. H. Ravenshaw, *Gaur, its Ruins and Inscriptions* (1878); A. Cunningham, *Archaeological Survey Reports*, vol. xv, pp. 79–94 (1879); *Reports of Archaeological Surveyor, Bengal Circle* (1900–1, 1902–3, and 1903–4); and *Archaeological Survey of India, Annual Report* (1902–3), pp. 51–5.]

Rohanpur.—Village in Mālda District, Bengal, situated in 24° 49′ N. and 88° 20′ E., on the Pūrnabhabā, a short distance above its junction with the Mahānandā. Population (1901), 1,112. The village is a considerable dépôt for the grain passing between Dinājpur and the western parts of Bihār.

Tanda (or Tānrā).—Ancient town in Mālda District, Eastern Bengal and Assam, the capital of Bengal after the decadence of Gaur. Its history is obscure, and the very site of the place has not been accurately determined. It is certain that it was in the immediate neighbourhood of Gaur, and south-west of that place, beyond the Bhāgīrathi. Old Tanda has been utterly swept away by the changes in the course of the Pāgla. The land which subsequently re-formed at or near the old site is known by the same name, and is recorded in the District records as Tanda or Tānrā. According to Stewart (*History of Bengal*, ed. 1847, p. 95), Sulaimān Shāh Kararānī, the last but two of the Afghān kings of Bengal, moved the seat of government to Tanda in 1564, eleven years before the final depopulation of Gaur. Though never a populous place, Tanda was a favourite residence for the Mughal governors of Bengal until the middle of the following century. In 1660 prince Shujā, when hard pressed by Mīr Jumla, Aurangzeb's general, retreated from Rājmahāl to Tanda, in the vicinity of which was fought the decisive battle in which the former was finally routed. After this date Tanda is not mentioned in history, and it was subsequently deserted by the Mughal governors in favour of Rājmahāl and Dacca.

Rangpur District.—District in the Rājshāhi Division of Eastern Bengal and Assam, lying between 25° 3′ and 26° 19′ N. and 88° 44′ and 89° 53′ E., with an area of 3,493 square miles. It is bounded on the north by Jalpaigurī District and the State of Cooch Behār; on the east by the Brahmaputra river, which separates it from Goālpāra, the Gāro Hills, and Mymensingh; on the south by Bogra; and on the west by Dinājpur and Jalpaigurī.

Boundaries, configuration, and river system.

Rangpur is one vast alluvial plain, without natural elevations of any kind. Towards the east, the wide valley of the Brahma-

putra is annually laid under water during the rainy season; and the remainder of the District is traversed by a network of streams, which frequently break through their sandy banks and plough for themselves new channels over the fields. These river changes have left their traces in the numerous stagnant pools or marshes which dot the whole face of the country, but do not spread into wide expanses as in the lower delta. The general inclination of the surface is from north-west to south-east, as indicated by the flow of the rivers.

The BRAHMAPUTRA practically forms the eastern boundary for a distance of 80 miles, but some sand-flats on its farther bank also belong to Rangpur. Though only skirting the eastern frontier, its mighty stream exercises a great influence over the District by the fertilizing effect of its inundations, and also by its diluviating action. The principal tributaries of the Brahmaputra on its western bank, within Rangpur, are the TĪSTA, Dharlā, Sankos, and Dudhkumār. The Tīsta receives numerous small tributary streams from the north-west and throws off many offshoots, the most important of which is the Ghāghāt, which meanders through the centre of the District for 114 miles. The Ghāghāt was formerly an important branch of the Tīsta, and, previous to the change in the course of that river in the eighteenth century, was an important channel of communication, passing by Rangpur town. The residents' bungalows, the Company's factories, and the old capital, Mahīganj, stretched along its banks. The opening from the Tīsta has now, however, nearly silted up, and the Ghāghāt has deserted its old bed. The KARATOYĀ, the most important river in the west, forms for some distance the boundary with Dinājpur. In its course through Rangpur, it receives two tributaries from the east, both of greater volume than itself, the Sarbamangalā and Jabuneswarī. The Dharlā marks for a few miles the boundary with Cooch Behār, and then turns south and enters the District, which it traverses in a tortuous south-easterly course for 55 miles before it falls into the Brahmaputra. The bed of this river is sandy and the current rapid, and numerous shallow and shifting sands render navigation extremely difficult. The only other rivers deserving mention are the Manās and Gujariā; but the District is everywhere seamed by small streams and watercourses, many of which are navigable by small craft in the rainy season. There are numerous stagnant marshes, some of them in inconvenient proximity to Rangpur town, forming a source of unhealthiness. These marshes are gradu-

ally silting up, a process which was accelerated, in some instances, by the upheaval of their beds during the earthquake of 1897.

The surface is covered with alluvium, the soil being a mixture of clay and sand deposited by the great rivers which drain the Himālayan region. For the most part this is of the recent alluvial type known as *pali*, but a strip of hard red clay in the south-west forms a continuation of the BĀRIND and contains nodules of *kankar*. This old alluvium is known as *kheyār*. Geology.

Where the ground is not occupied by the usual crops of Northern Bengal, it is covered with abundant natural vegetation. Old river-beds, ponds and marshes, and streams with a sluggish current have a copious vegetation of *Vallisneria* and other plants. Land subject to inundation has usually a covering of *Tamarix* and reedy grasses; and in some parts, where the ground is more or less marshy, *Rosa involucrata* is plentiful. Few trees occur on these inundated lands; the most plentiful and largest is *Barringtonia acutangula*. The District contains no forests; and even on the higher ground the tree vegetation is sparse, the individuals rather stunted as a rule, and the greater portion of the surface is covered with grasses, the commonest of these being *Imperata arundinacea* and *Andropogon aciculatus*. Among the trees the most conspicuous are varieties of *Ficus* and the red cotton-tree (*Bombax malabaricum*). The *sissū* (*Dalbergia Sissoo*), the mango, the areca palm (*Areca Catechu*), jack (*Artocarpus integrifolia*), bamboo, plantain, species of *Citrus*, *bakul* (*Mimusops Elengi*), *nāgeswar* (*Mesua ferrea*), and *jām* (*Eugenia Jambolana*) occur as planted or sometimes self-sown species. The villages are generally embedded in thickets or shrubberies of semi-spontaneous and more or less useful trees. The *tejpāt* (*Laurus Cassia*) is grown for its aromatic leaves which are exported as a condiment, and pineapples are common. Botany.

Leopards and wild hog are still met with, especially in the alluvial islands of the Brahmaputra; but tigers, which were formerly numerous, have disappeared before the spread of cultivation. Fauna.

In the cold-season months northerly or north-easterly winds from the Himālayan region prevail, and the temperature is comparatively low, the mean minimum falling to 49° in January. The highest mean maximum temperature is 91° in April. Rainfall commences early, with 4 inches in April and 11 in May, and is heavy, the average fall for the year being 82 inches, Temperature and rainfall.

of which 19½ inches occur in June, 15 in July, 12 in August, 13 in September, and 5 in October.

Natural calamities. The earthquake of 1897 was very severely felt in Rangpur. Not only did it destroy buildings and cause damage estimated at 30 lakhs, but by upheaving the beds of rivers it effected serious alterations in the drainage of the country. Rangpur town, for instance, was seriously affected by the raising of the beds of its drainage channels, and the public buildings and masonry houses were entirely or partially wrecked. Moreover, the earth opened in fissures, from which torrents of mud and water poured on to the fields, causing widespread destruction of the standing crops and rendering the lands uncultivable. Considerable subsidences also occurred, especially in the neighbourhood of Gaibānda, where marshes were formed.

The District is liable to inundation; but no notable disaster has occurred since the great flood of 1787, which not only caused terrible loss of life and widespread destruction of crops, resulting in famine, but, by forcing the Tīsta to change its course, completely altered the hydrography of the District. In the same disastrous year a cyclone swept over the stricken country; hundreds of trees were blown down or torn up by the roots; the bungalows of the Europeans were almost all unroofed, and there was scarcely a thatched house left standing.

History. According to the Mahābhārata, Rangpur formed the western outpost of the ancient Hindu kingdom of Kāmarūpa, or Prāgjyotisha, which extended westwards as far as the Karatoyā river. The capital was generally much farther east; but the great Rājā Bhagadatta, whose defeat is recorded in the epic, is said to have built a country residence at Rangpur, which is locally interpreted to mean the 'abode of pleasure.' Local traditions have preserved the names of three dynasties that ruled over this tract of country prior to the fifteenth century. The earliest of these is associated with the name of Prithu Rājā, the extensive ruins of whose capital are still pointed out at BHITARGARH in Jalpaigurī District. Next came a dynasty of four kings, whose family name of Pāl recurs in other parts of Bengal and also in Assam; and lastly a dynasty of three Khen kings—Nīladhwaj, Chakradhwaj, and Nīlāmbar—the first of whom founded KAMĀTĀPUR in Cooch Behār. Rājā Nīlāmbar is said to have been a great monarch; but about 1498 he came into collision with Alā-ud-dīn Husain, the Afghān king of Gaur, who took his capital by stratagem, and carried him away prisoner in an iron cage. The Muham-

madans, however, did not retain their hold upon the country. A period of anarchy ensued; among the wild tribes which then overran Rangpur, the Koch came to the front and their chief, Biswa Singh, founded the dynasty which still exists in COOCH BEHĀR, and of which an account is given in the article on that State. As soon as the Mughal emperors had established their supremacy in Bengal, their viceroys began to push their north-eastern frontier across the Brahmaputra. By 1603 the Muhammadans were firmly established at Rāngāmāti in Goālpāra; but Rangpur proper was not completely subjugated until 1661, though it had been nominally annexed to the Mughal empire in 1584. In the extreme north the Cooch Behār Rājās were able to offer such a resolute resistance that in 1711 they obtained a favourable compromise, in accordance with which they paid tribute as *zamīndārs* for the *parganas* of Bodā, Patgrām, and Purbabhāg, but retained their independence in Cooch Behār proper.

When the East India Company acquired the financial administration of Bengal in 1765, the 'province' of Rangpur, as it was then called, was a frontier tract bordering on Nepāl, Bhutān, Assam, and Cooch Behār, and included the District of Rāngāmāti, east of the Brahmaputra, as well as a great part of the present District of Jalpaigurī. Its enormous area, and the weakness of the administrative staff, prevented the Collector from preserving order in the remote corners of his District, which thus became the secure refuges of banditti. The early records of Rangpur and the neighbouring parts of Bengal are full of complaints on this head, and of encounters between detachments of sepoys and armed bands of dacoits. In 1772 the banditti, reinforced by disbanded troops from the native armies, and by the peasants ruined in the famine of 1770, were plundering and burning villages in bodies of fifty thousand. A small British force sent against them received a check; and in 1773 Captain Thomas, the leader of another party, was cut off, and four battalions had to be employed. In the year 1789 the Collector conducted a regular campaign against these disturbers of the peace, who had fled to the great forest of Baikuntpur, now in Jalpaigurī. There he blockaded them with a force of 200 *barkandāz* and compelled them to surrender, and no less than 549 robbers were brought to trial. At first the British continued the Muhammadan practice of farming out the land revenue to contractors; but in 1783 the exactions of a notorious farmer, Rājā Devī Singh of Dinājpur, drove the Rangpur cultivators into open rebellion, and the

Government was induced to invite the *zamīndārs* to enter into direct engagements for the revenue.

In recent times Rangpur has had no history beyond the recital of administrative changes. The tract east of the Brahmaputra was formed into the District of Goālpāra in 1822, and in 1826 was transferred to the province of Assam. Three northern *parganas* now constitute part of the District of Jalpaigurī, and a considerable area in the south has been transferred to Bogra. One large estate, known as the Patiladaha estate, is situated partly in Rangpur and partly in Mymensingh District; it pays revenue into the Rangpur treasury, but the greater portion is under the criminal supervision of the Magistrate of Mymensingh.

Archaeology. On the east bank of the Karatoyā at KAMĀTĀPUR, about 30 miles south of Rangpur, are the ruins of an old fort, which according to tradition was built by Nīlāmbar, the last and greatest of the Khen Rājās. It is about three-quarters of a mile in diameter, and is enclosed by a lofty earthen rampart and moat. Close by is a *dargāh* or Muhammadan shrine, which is said to have been erected over the staff of the Muhammadan saint Ismail Ghāzī, governor of Ghorāghāt, who is famed for having forcibly converted the neighbouring *zamīndārs* to Islām. A few miles south of Dimlā are the remains of a fortified city, which retains the name of Dharma Pāl. It is in the form of an irregular parallelogram, rather less than a mile from north to south and three-quarters of a mile from east to west, and is surrounded by raised ramparts of earth and ditches. Tradition connects these ruins with the Pāl Rājās. A brick temple of Sarbamangalā, 250 years old, stands 2½ miles east of the Gobindganj police station; the battles described in the Rāmāyana, Mahābhārata, and other Hindu works are depicted on the walls.

The people. There has been no real increase in the population since 1872, and no other part of Bengal shows so little progress in this respect. Owing to the prevalence of malarial fever, the inhabitants decreased from 2,153,686 in 1872 to 2,097,964 in 1881 and 2,065,464 in 1891. Since 1891 the lost ground has been recovered; and, though this is mainly due to immigration, there has undoubtedly been a great improvement in public health. The principal diseases are malarial fevers, small-pox, and cholera. Goitre and elephantiasis are also common. Insanity is prevalent, owing to the large proportion of persons of Koch origin who are especially subject to this infirmity.

The chief statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Rangpur . .	1,141	1	1,897	658,291	577	+ 1·8	25,153
Nilphāmāri .	648	3	370	461,314	712	+ 3·0	19,361
Kurigrām . .	942	1	1,518	514,392	546	+ 1·3	15,011
Gaibānda . .	762	1	1,427	520,184	683	+ 12·2	14,299
District total	3,493	6	5,212	2,154,181	617	+ 4·3	73,824

The principal towns are RANGPUR and SAIDPUR. Thanks to its very fertile soil, Rangpur, in spite of its long-continued unhealthiness, has still a far denser population than most of the surrounding Districts. The only parts where there are less than 500 persons per square mile are the two unhealthy and ill-drained *thānas* of Pīrganj and Mitāpukur in the south-central part of the District, and Alīpur on the eastern boundary, which includes in its area the bed and sandy islands of the Brahmaputra. The densest population is found in the north-west, in the Nilphāmāri subdivision, where jute cultivation and trade are carried on very extensively. The immigrants consist of temporary labourers from Bihār and the United Provinces, and more permanent settlers from Dacca, Pābna, and Nadiā. The result of the large temporary immigration is a remarkable preponderance of the male population, which exceeds the number of females by 8·5 per cent. The language spoken is the dialect of Bengali known as Rangpurī or Rājbansī. Muhammadans number 1,371,430, or nearly 64 per cent. of the total; and Hindus 776,646, or 36 per cent. The former are much the more prolific, and have steadily increased from 61 per cent. in 1881 to their present proportion.

Castes and occupations.

The Aryan castes are very poorly represented. Nearly two-thirds of the Hindu population are Rājbansis, a caste of mixed origin, partly descended from Mongoloid Koch, and partly of Dravidian stock; many Baishnabs have been recruited from this caste. Members of the great aboriginal castes of Eastern Bengal, Chandāl and Kaibartta, are also numerous. Of the Musalmāns, 92 per cent. call themselves Shaikhs and nearly all the rest Nasyas (converted Rājbansis); all are probably descendants of converts from the aboriginal Hindu castes. Of the total population, 85 per cent. are supported by agriculture, 6 per cent. by industry, and 1 per cent. by one or other of the

professions; while earthwork and general labour employ nearly 4 per cent. The proportion of agriculturists far exceeds the general average for Bengal, while the industrial proportion is only half.

Christian missions.

Christians in 1901 numbered 453, including 92 native Christians; they are chiefly railway employés in Saidpur, most of whom belong to the Anglican communion or the Roman Catholic Church. A Baptist mission at Rangpur has made some 60 converts.

General agricultural conditions.

The soil is remarkably fertile, being generally a sandy loam deposited by the rivers when in flood. In the north there are extensive sandy plains, the remains of old watercourses, especially of the numerous old beds of the Tīsta, admirably suited to the cultivation of tobacco, for which the District is noted. A strip of hard red clay in the west, which is part of the Bārind, is favourable for the cultivation of fine qualities of winter rice and sugar-cane.

Chief agricultural statistics and principal crops.

The chief agricultural statistics for 1903-4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Rangpur . .	1,141	763	141
Nilphāmāri . .	648	444	95
Kurigrām . .	942	404	139
Gaibānda . .	762	304	94
Total	3,493	1,915	469

No less than 1,222 square miles, or 64 per cent. of the net cultivated area, are twice cropped. The principal staples are rice, jute, rape and mustard, and tobacco. By far the most extensive crop is rice, which occupies 88 per cent. of the net cropped area. More than three-quarters of the crop is harvested in the winter, and the rest in the autumn. The early rice is grown principally on high lands, but one variety thrives on low marshy soil. The light alluvial soils are admirably suited to jute cultivation, and Rangpur yields an eighth of the whole output of Bengal, being second only to Mymensingh. Tobacco, another speciality of the District, thrives best on the sandy lands along the banks of the Tīsta river. Rape and mustard are also largely grown in Rangpur, being especially common on the islands in the Brahmaputra. Potatoes are coming into favour.

Improvements in

During the past twenty years there has been a considerable spread of cultivation by the reclamation of waste and silted-up

marshy lands, and there is now little room for further extension. The progress of jute cultivation has been extraordinary, and to some extent this has been at the expense of rice. There is little or no irrigation, which is rendered unnecessary by the copious and regular rainfall. Owing to the fertility of the soil and the prosperity of the people, little use has been made of the Land Improvement and Agriculturists' Loans Acts; but in 1897-8, a year of poor crops, Rs. 3,400 was advanced under the latter Act. agricultural practice.

Cattle.

The country-bred cattle are poor, and animals from Upper India are purchased in large numbers at the Darwāni fair. Buffaloes, though small, are largely reared and are exported in considerable numbers to Assam. Very little pasturage is left except in the river islands, and it is difficult to feed the cattle, especially during the rains.

Arts and manufactures.

Indigenous manufactures are insignificant and decaying. Cotton carpets and cloth, gunny cloth, and rough silk (*endi*) are woven on a small scale, and some brass-ware and bell-metal utensils are manufactured. There are jute-presses at DOMĀR and SAIDPUR, and railway workshops at the latter place.

Commerce.

The trade is now almost entirely carried by rail. The chief imports are cotton piece-goods, salt, kerosene oil, coal, and rice; and the chief exports are jute, tobacco, mustard, unrefined sugar, and rice. The centres of the jute export business are Domār, Darwāni, Saidpur, and Rangpur town. Tobacco is bought by the Arakanese and exported to Burma, where it is manufactured into cigars. Rice is imported chiefly from the neighbouring Districts of Dinājpur and Bogra, and exported to Calcutta; coal is imported from Burdwān and Mānbhūm, and some tobacco goes to the neighbouring Districts; but the rest of the trade is with Calcutta. The merchants are for the most part Europeans, Mārwāris, and Sāhās. The brokers are local Muhammadans, with a sprinkling of Rājbansis.

Railways and roads.

Few Districts are better provided with railway communication, which has been rapidly extended within recent years. The northern branch of the Eastern Bengal State Railway intersects the west of the District from south to north. From the Pārvatīpur station, on this line, the Assam line strikes eastward, passing through Rangpur town and crossing the Tīsta and Dharlā rivers by large bridges. In 1901 this line had its terminus at Gitaldāha in Cooch Behār, but it has since been extended to Dhubri in Assam; a branch line starts from the

left bank of the Tīsta and runs to Kurigrām. The Bengal-Duārs Railway starts from the Lālmanir Hāt station on the Assam line, and, after traversing the north of the District, meets the Eastern Bengal State Railway at Jalpaigurī. Finally, a branch line, called the Brahmaputra-Sultānpur Branch Railway, from the Eastern Bengal State Railway at Sāntāhār traverses the Gaibānda subdivision to Phulcharī, on the right bank of the Brahmaputra. A new line from Kauniā to Bonārpāra, on the Brahmaputra-Sultānpur Branch Railway, has been recently sanctioned. In 1903–4 the total length of roads was 2,477 miles, but of these only 14 miles were metalled. They are maintained by the District board, with occasional help from Provincial revenues for the upkeep of feeder-roads for the railways. The principal roads are those to Bogra, Dinājpur, Jalpaigurī, Cooch Behār, Dhubri, Chilmāri, and Phulcharī.

Water communications. The steamers of the India General and the Rivers Steam Navigation Companies, which ply up and down the Brahmaputra, stop at four stations within the District. The Tīsta and Dharlā are navigable throughout the year, and most of the other rivers during the rainy season, by ordinary native trading boats and dug-outs. There are 146 public ferries, yielding an income of Rs. 48,000 per annum to the District board, as well as numerous private ferries.

Famine. The famine which followed the storm and cyclone of the disastrous year 1787 is said to have carried off one-sixth of the population. Since that date no severe famine has visited the District, though in 1874 some relief was necessary.

District subdivisions and staff. For administrative purposes the District is divided into four subdivisions, with head-quarters at RANGPUR, NILPHĀMĀRI, KURIGRĀM, and GAIBĀNDA. The staff at head-quarters comprises, in addition to the Magistrate-Collector, four Deputy-Magistrate-Collectors, while each of the other subdivisions is in charge of a Deputy-Magistrate-Collector.

Civil and criminal justice. There are in all 14 criminal courts (including those of honorary magistrates) and 9 civil courts: namely, those of the District and Sessions Judge, Subordinate Judge, and two Munsifs at Rangpur town, two at Kurigrām, two at Gaibānda, and two at Nilphāmāri. Offences against marriage and the abduction of girls are very common, and cases of arson and petty burglary are also numerous.

Land revenue. The changes which have taken place in its boundaries render it difficult to trace the early revenue history of the present District. In 1740 the land revenue was 3·4 lakhs; and by 1764, the year preceding the British occupation, it had

risen to 5·1 lakhs, the actual collections being 4·9 lakhs. In 1765, the first year of British administration, no less than 9·1 lakhs was realized. The revenues were then farmed, and it was not until 1778 that the *zamīndārs* were admitted to settlement. The District was permanently settled in 1793 for 8·2 lakhs.

The current land revenue demand for 1903–4 was 10·1 lakhs, of which all but Rs. 4,000 was due from permanently settled estates. The increase since 1793 is due to the resumption and assessment of lands held free of revenue under invalid titles. At the time of the Permanent Settlement the District comprised only 75 estates; these have increased to 659 by partitions, resumptions, and transfers from other Districts. The revenue is collected with extreme punctuality. Its incidence is light, as it is only equivalent to R. 0–12–2 per cultivated acre, or to one-fifth of the *zamīndārs'* rent-rolls. The *jot* (holding) is here occasionally a very big tenure, especially in the east of the District, where the biggest *jotdār* has a rent-roll of Rs. 80,000. *Chukāni* is the name of an under-tenure subleased from a *jotdār*, the actual cultivator below the *chukānidār* being generally an *ādhiār*, who pays half the crop as rent. *Upanchakī* is the name of a tenure granted for charitable or religious purposes at a quit-rent in perpetuity; the *majkuri* is a similar tenure, but liable to enhancement of rent. The average rates of rent paid by actual cultivators to their immediate landlords vary from Rs. 3–6 to Rs. 6 an acre; higher rents are paid for good loam lands and lower for hard clays. The great majority of the ryots possess occupancy rights, and the number who hold either at fixed rents or without a right of occupancy is very small.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	10,19	10,15	10,15	9,83
Total revenue . .	17,22	18,16	20,17	20,68

Outside the RANGPUR municipality local affairs are managed by the District board, with a local board for each of the subdivisions. In 1903–4 the income of the District board was Rs. 3,41,000, of which Rs. 1,23,000 was derived from rates; and the expenditure was Rs. 2,82,000, including Rs. 1,83,000 spent on public works and Rs. 60,000 on education. Local and municipal government.

Police and jails. The District contains 17 *thānas* or police stations and 9 outposts. In 1903 the force under the control of the District Superintendent consisted of 4 inspectors, 44 sub-inspectors, 34 head constables, and 387 constables. In addition, the village police numbered 441 *daffadārs* and 4,655 *chaukīdārs*. The District jail has accommodation for 263 prisoners, and the subsidiary jails at the subdivisional head-quarters for 53.

Education. Education is very backward, and in 1901 only 3·4 per cent. of the population (6 males and 0·2 females) could read and write. A considerable advance has, however, been made in recent years, the total number of pupils under instruction having increased from about 17,000 in 1883 to 22,875 in 1892–3 and 31,001 in 1900–1, while 37,576 boys and 1,742 girls were at school in 1903–4, being respectively 22·2 and 1·1 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 1,227, including 64 secondary and 1,131 primary schools. The expenditure on education was 2 lakhs, of which Rs. 22,000 was met from Provincial funds, Rs. 54,000 from District funds, Rs. 1,000 from municipal funds, and Rs. 95,000 from fees. The most important educational institution is the technical school in Rangpur town.

Medical. Rangpur is well provided with medical relief, as it contains 25 charitable dispensaries, of which 7 have accommodation for 102 in-patients. The number of cases treated in 1903 was 1,257 in-patients and 163,000 out-patients, and 3,411 operations were performed. The expenditure was Rs. 50,000, of which Rs. 8,000 was met from Government contributions, Rs. 6,000 from Local and Rs. 3,000 from municipal funds, and Rs. 12,000 from subscriptions.

Vaccination. Vaccination is compulsory only in Rangpur town. In 1903–4 the number of successful operations performed was 77,000, representing 36 per 1,000 of the population.

[Martin, *Eastern India*, vol. iii (1838); *Further Notes on the Rangpur Records* (Calcutta, 1876); and Sir W. W. Hunter, *Statistical Account of Bengal*, vol. vii (1876).]

Rangpur Subdivision. — Head-quarters subdivision of Rangpur District, Eastern Bengal and Assam, lying between 25° 18′ and 26° 16′ N. and 88° 56′ and 89° 31′ E., with an area of 1,141 square miles. The subdivision is mainly an alluvial tract, drained on the extreme west by the Karatoyā and intersected by the Ghāghāt, a small tortuous river, on either side of which are swamps and many channels clogged with vegetation. The population in 1901 was 658,291, com-

pared with 646,388 in 1891. It contains one town, RANGPUR (population, 15,960), the head-quarters; and 1,897 villages. The density is 577 persons per square mile. The subdivision is unhealthy, and two of its *thānas*, Mahīganj and Mitāpukur, have lost population since 1891 and still more since 1872.

Nilphāmāri Subdivision.—North-western subdivision of Rangpur District, Eastern Bengal and Assam, lying between 25° 44′ and 26° 19′ N. and 88° 44′ and 89° 11′ E., with an area of 648 square miles. The subdivision, which is bounded on the east by the Tīsta, is a level strip of country, containing large sandy plains alternated with low loam and clay rice lands. The population in 1901 was 461,314, compared with 447,764 in 1891. It contains three towns, NILPHĀMĀRI (population, 2,396), the head-quarters, SAIDPUR (5,848), an important railway centre, and DOMĀR (1,868); and 370 villages. The density is 712 persons per square mile. The subdivision is healthy, and the cultivation of tobacco and sugar-cane is extending.

Kurigrām Subdivision. — North-eastern subdivision of Rangpur District, Eastern Bengal and Assam, lying between 25° 23′ and 26° 14′ N. and 89° 20′ and 89° 53′ E., along the right bank of the Brahmaputra, with an area of 942 square miles. The population in 1901 was 514,392, compared with 507,711 in 1891, and the density was 546 persons per square mile. The subdivision, which is an alluvial tract, part of which is drained by the Dharlā, has lost area by diluvion, and cholera epidemics have been frequent, as the labour route to Assam formerly passed through it. There is only one town, KURIGRĀM (population, 1,777), the head-quarters; and 1,518 villages. Chilmāri, on the Brahmaputra, is a place of pilgrimage, where an annual bathing festival takes place. Lālmanir Hāt is the junction of the Bengal-Duārs and the Eastern Bengal State Railways.

Gaibānda Subdivision. — South-eastern subdivision of Rangpur District, Eastern Bengal and Assam, lying between 25° 3′ and 25° 39′ N. and 89° 12′ and 89° 42′ E., along the right bank of the Brahmaputra, with an area of 762 square miles. The subdivision is a flat unbroken plain, containing numerous *jhīls* and marshes. The population in 1901 was 520,184, compared with 463,601 in 1891, and the density was 683 persons per square mile. This is the most progressive part of the District, the population having increased by 12·2 per cent. during the last decade, owing to the opening of the Brahmaputra-Sultānpur Branch Railway and to the exten-

sion of jute cultivation, which has attracted settlers from the unhealthy north-western *thānas*, and also from Pābna and Mymensingh. GAIBĀNDA (population, 1,635), the head-quarters, is the only town; and there are 1,427 villages.

Domār.—Town in the Nilphāmāri subdivision of Rangpur District, Eastern Bengal and Assam, situated in 26° 6′ N. and 88° 50′ E., on the northern section of the Eastern Bengal State Railway. Population (1901), 1,868. It is a large jute-exporting centre, containing jute-presses.

Gaibānda Town.—Head-quarters of the subdivision of the same name in Rangpur District, Eastern Bengal and Assam, situated in 25° 21′ N. and 89° 34′ E., on the Ghāghāt river. Population (1901), 1,635. The town contains the usual public offices; the sub-jail has accommodation for 18 prisoners.

Kurigrām Town.—Head-quarters of the subdivision of the same name in Rangpur District, Eastern Bengal and Assam, situated in 25° 50′ N. and 89° 40′ E., on the right bank of the Dharlā river. Population (1901), 1,777. It is a station on the Kurigrām branch of the Eastern Bengal State Railway. The town contains the usual public offices; the sub-jail has accommodation for 17 prisoners.

Nilphāmāri Town.—Head-quarters of the subdivision of the same name in Rangpur District, Eastern Bengal and Assam, situated in 25° 58′ N. and 88° 51′ E. Population (1901), 2,396. It is a station on the Eastern Bengal State Railway. The town contains the usual public offices; the sub-jail has accommodation for 18 prisoners.

Phulcharī.—Village in the Galbānda subdivision of Rangpur District, Eastern Bengal and Assam, situated in 25° 12′ N. and 89° 37′ E., on the right bank of the Brahmaputra river. Population (1901), 2,782. It is the terminus of the Brahmaputra-Sultānpur Branch Railway, and a large jute-exporting centre.

Rangpur Town.—Head-quarters of the District of the same name in Eastern Bengal and Assam, situated in 25° 45′ N. and 89° 15′ E. Population (1901), 15,960. The name of Rangpur (the 'abode of bliss') is said to be derived from the legend that Rājā Bhagadatta, who took part in the war of the Mahābhārata, possessed a country residence here. Rangpur was captured by the Afghān king Alā-ud-dīn Husain, who ruled at Gaur from 1493 to 1519. It is an unhealthy place, and suffered severely in the earthquake of 1897, when nearly all its buildings were wrecked. Rangpur was constituted a municipality in 1869. The municipal income during the decade

ending 1901–2 averaged Rs. 31,000, and the expenditure Rs. 26,000. In 1903–4 the income was Rs. 53,000, of which Rs. 9,000 was derived from a tax on persons (or property tax), Rs. 8,000 from a conservancy rate, and Rs. 9,000 from a tax on vehicles; the expenditure in the same year was Rs. 59,000. Two channels have been dug to drain the marshes in the neighbourhood of the town, but one of them was rendered useless by the earthquake of 1897. The town contains the usual public offices. The District jail has accommodation for 263 prisoners. The principal jail industries carried on are oil-pressing, *surki*-pounding, string- and rope-making, bamboo and cane-work, cloth-weaving, carpentry, paddy-husking, and wheat and pulse-grinding. The Rangpur District school was founded in 1832 by the local *zamīndārs*, and was taken over by Government in 1862; there were 385 pupils in 1901. The Tājhāt estate maintains a high school, for which a good building has recently been erected. A technical school, known as the Bayley-Gobind Lāl Technical Institute, was founded in 1889, and is affiliated to the Sibpur Engineering College; it has 101 pupils on its rolls.

Saidpur.—Town in the Nilphāmāri subdivision of Rangpur District, Eastern Bengal and Assam, situated in 25° 47′ N. and 88° 54′ E. Population (1901), 5,848. It is the head-quarters of the northern section of the Eastern Bengal State Railway, and contains large railway workshops and also jute-presses. A company of the Eastern Bengal State Railway Volunteer Corps, 157 strong, has its head-quarters here.

Bogra District (*Bagurā*).—District in the Rājshāhi Division of Eastern Bengal and Assam, lying between 24° 32′ and 25° 19′ N. and 88° 52′ and 89° 41′ E., with an area of 1,359 square miles. Bogra is a small District, but it is very prosperous, as its fertile soil grows fine jute crops and communications are excellent both by rail and river. It lies on the right bank of the Brahmaputra (here called the Daokobā), and is bounded on the north by the Districts of Rangpur and Dinājpur; on the south by Pābna and Rājshāhi; and on the west by Rājshāhi and Dinājpur.

Boundaries, configuration, and river system.

The Karatoyā river traverses the District from north to south, and divides it into two unequal portions with distinct characteristics. The eastern tract is a light loam, the ordinary alluvium of the lower Brahmaputra valley, while the western and larger portion merges into the undulating clay of Dinājpur, and belongs to the elevated tract of quasi-laterite formation known as the BĀRIND, in which name the BĀRENDRA division

of ancient Bengal still survives. Here the soil is a stiff reddish clay, resting on a lower stratum of sand, and covered, where not reclaimed, by dense undergrowth. The District is seamed by river-beds. The JAMUNĀ (2), which forms the greater part of the western boundary, the Nāgar, KARATOYĀ (or Phuljhur), and Bangāli are all portions of the same drainage system; they are connected by cross-streams, and all fall ultimately into the Atrai or the Brahmaputra. Numerous marshes have been formed by the silting up of the old river-beds and the consequent obstruction of the drainage in the depressed tracts between them. In the east and south especially the greater part of the country is a network of swamps, most of which are dry from January to June. One of these, known locally as the Bara Bīl, is connected with the great Chalan Bīl in Rājshāhi.

Geology. The surface is covered by alluvium. The Bārind belongs to an older alluvial formation, which is usually composed of massive argillaceous beds of a rather pale reddish-brown hue, often weathering yellowish, disseminated throughout which occur *kankar* and pisolitic ferruginous concretions. The newer alluvial deposits consist of sandy clay and sand along the course of the rivers, and fine silt consolidating into clay in the flatter parts of the river plain.

Botany. Where the ground is not occupied by the usual crops of North Bengal, it is covered with an abundant natural vegetation. Old river-beds, ponds and marshes, and streams with a sluggish current have a copious vegetation of *Vallisneria* and other plants. Land subject to inundation has usually a covering of *Tamarix* and reedy grasses, and where the ground is more or less marshy *Rosa involucrata* is plentiful. Few trees occur on these inundated lands; the most plentiful and largest is *Barringtonia acutangula*. The District contains no forests, but in the Bārind gigantic *pīpal* (*Ficus religiosa*) and *sāl* trees (*Shorea robusta*) are numerous, and dense scrub jungle still remains in places in the Sherpur and Pānchbībī *thānas*; even here, however, the greater portion of the surface is covered with grasses, the commonest of these being *Imperata arundinacea* and *Andropogon aciculatus*. Among the trees the most conspicuous are the red cotton-tree (*Bombax malabaricum*) and the jack-tree (*Artocarpus integrifolia*); the *sissū* (*Dalbergia Sissoo*) and mango occur as planted or sometimes self-sown species. The villages are generally surrounded by thickets or shrubberies of semi-spontaneous trees of a more or less useful character.

Fauna. Leopards are still met with in the jungles of the Bārind, but

tigers, which were formerly numerous, have disappeared before the spread of cultivation.

Temperature and rainfall. The temperature in the cold season is comparatively low, owing to northerly winds from the Himālayan region; and the heat is never excessive, the mean temperature being 64°, the mean maximum 96° in April, and the mean minimum 57° in January. Mean temperature rises to 77° in March and reaches 84°, its highest point, in April. Rainfall commences early in the hot season, and the annual fall averages 65 inches, of which 7·9 inches occur in May, 12·5 in June, 12·6 in July, 11·5 in August, and 10·6 in September.

Natural calamities. A terrible cyclone swept over the District on October 5, 1864, from the south-east, destroying many houses and trees; it was accompanied by a high flood in the eastern *thānas*. A still higher flood occurred in 1886, when the extraordinary rainfall of 18 inches took place between the hours of 11.30 p.m. and 1 a.m. on the night of June 30. The town of Bogra and the greater part of the District were flooded, and portions of the railway were swept away. The District has suffered much from earthquakes. Many lives were lost in that of June, 1885, when the line of greatest intensity passed through Bogra, and the earthquake of December, 1888, also did considerable damage; but the most severe of recent times was that of 1897, which overthrew most of the brick buildings in the towns of Bogra and Sherpur, including the Government offices, and struck a severe blow at the prosperity of the latter town, which was already decadent. At the same time numerous fissures opened, and outpourings of sand and water occurred in the soft soil between the Karatoyā and Brahmaputra rivers; marked changes also took place in the level of the country, and the roads and bridges were damaged.

History. Little is known of the early history of the District. The Karatoyā river at one time formed the boundary between the old kingdoms of Kāmarūpa and Pundra or Paundravardhana, the country of the Pods, whose capital was at MAHĀSTHĀN. In the ninth century the Pāl dynasty ruled the country; but they were ousted in the eleventh century by the Sens, a Hindu dynasty which gave the name of Bārendra to the old Pundra country. When the District came under the Muhammadans, they had a fort at Mahāsthān and a frontier outpost at SHERPUR. Bogra passed under British rule with the rest of Bengal in 1765. The District was first formed in 1821, when certain *thānas* were taken from Rājshāhi, Dinājpur, and Rangpur, and placed for the purposes of criminal jurisdiction under a Joint-

Magistrate, who was stationed at Bogra; in 1832 he was charged with the collection of revenue from some estates. Several minor interchanges of jurisdiction subsequently took place with the neighbouring Districts, but it was not until 1859 that Bogra was definitely constituted an independent District.

Archaeology. Archaeological interest centres round Mahāsthān and Sherpur, but there are also ruins at Khetlāl and elsewhere, while Bhawānīpur, on the southern border, is connected by tradition with Rānī Bhawāni, and is much frequented by Hindus from Pābna and Rājshāhi.

The people. Bogra is, after Pābna, the most densely populated District in North Bengal, having a density of 629 persons per square mile. It contains two towns, BOGRA, the administrative head-quarters, and SHERPUR; and 3,865 villages. The population increased from 642,060 in 1872 to 686,974 in 1881, 764,461 in 1891, and 854,533 in 1901. The increase during the last decade, which was 11·8 per cent. for the whole District, was greatest in the Bārind, which is still sparsely populated, and in Dhunot, already the most crowded *thāna* in the District. The climate is fairly healthy, except along the banks of the moribund Karatoyā river, and in the towns of Bogra and Sherpur, where malaria is very prevalent. The increase in Pānchbībī is largely due to the immigration of Santāls and Mundās, known locally as Bunās, from the Chotā Nāgpur plateau; there is also a considerable influx from Nadiā, Sāran, and the United Provinces. The vernacular spoken is Bengali.

Castes and occupations. Hindus number 154,131, or 18 per cent. of the population, and Muhammadans 699,185, or 82 per cent., a higher proportion than in any other District in Bengal. The Muhammadans are mostly Shaikhs, though there are also Jolāhās, Kulus, Pathāns, and Saiyids. With the exception of the two last-named communities, which number 5,000, the great majority are probably the descendants of converts from the Koch or Rājbansis of North Bengal, who are the most numerous (30,000) of the Hindu castes in the District. The fact that conversion to Islām has taken place on a large scale seems to be shown by the number of villages which bear Hindu names but have no Hindu inhabitants. No less than 748,100 persons, or 87·5 per cent. of the population, are dependent on agriculture, while of the remainder 6·4 per cent. are supported by industries, 0·4 by commerce, and 1·1 by the professions.

Christian missions. A brotherhood of Christians professing to belong to no established Church has recently settled at Bogra, but has not yet been successful in making conversions.

General agricultural conditions.

The east of the District, especially the densely populated Dhunot *thāna*, is low, and receives annual deposits of silt from the floods which cover it; the soil is friable and grows excellent crops of jute. Very similar conditions prevail in Sibganj and Shāriākāndi, where, however, jute is less extensively grown. The part of the Bogra *thāna* to the east of the Karatoyā contains a large area of permanent marsh in the low tracts between and at a distance from the larger water-courses, whose beds have been raised by deposits of silt. The *thānas* of Khetlāl and Adamdīghi, west of the Karatoyā, are extensive plains noted for the production of the finer kinds of rice. In Pānchbībī the jungles are being gradually cleared by migratory Santāls and Mundās, who move on as soon as rent is demanded, leaving the land they have reclaimed to be occupied by settled cultivators; recently, however, a large number have settled permanently in this tract. In 1903-4 the net area cropped was estimated at 728 square miles, while 153 square miles were cultivable waste.

Principal crops.

Rice is the staple food-crop; the winter rice, which is the most important harvest, is sown on low lands in June, July, and August, and reaped in November and December. Jute is, after rice, the most important product; and the rapid growth of the jute trade in recent years has done much to enrich the inhabitants of the Dhunot, Shāriākāndi, and Sibganj *thānas*, where it is chiefly grown. Sugar-cane is almost confined to Pānchbībī and Sibganj. Oilseeds are grown in the east of the District, as also pulses and a little tobacco.

Improvements in agricultural practice.

The cultivated area is being gradually extended, especially in the Bārind. Mulberry cultivation, which had almost entirely disappeared, has recently received some encouragement from the District board, and strips of raised land near Bogra town have been planted with it. Agricultural experiments have been conducted in the Jaypur Government estates, and Patna potatoes and Cooch Behār tobacco have been introduced. Owing to the fertility of the soil and the prosperity of the people, there is generally little need for loans under the Land Improvement and Agriculturists' Loans Acts; but Rs. 2,000 was advanced in 1897, when there was some slight scarcity.

Cattle.

The local cattle are small, but a few buffaloes and large Bihār bullocks have been imported. There are no regular pastures, and there is considerable difficulty, especially during the rains, in providing food for cattle in the flooded tracts. At the Jāmtali-Rukindirpur fair, held about the middle of January, agricultural produce is exhibited for prizes. This

fair was started in connexion with the Jaypur Government estates, but has not been very successful, and it is proposed to remove it to Bogra town. None of the other twenty-eight fairs calls for special mention.

Irrigation. There is no general system of irrigation, but after the rice harvest a few cultivators take advantage of tanks or pools to irrigate their fields for a spring crop.

Arts and manufactures. Industries are insignificant. Silk-weaving, once prosperous, has decayed owing to the prevalence of silkworm epidemics, and is now practised only by a few families near Bogra town; but efforts are being made by the Bengal Silk Committee, assisted by Government, to exterminate these diseases. Cotton-weaving is carried on by Muhammadans, but this also is a decadent industry.

Commerce. Rice and jute form the principal exports, and next to them come hides. HILLI, on the main line of railway, is an important centre for the export of rice and jute; and a large quantity of produce is also conveyed by the newly opened branch line from Sāntāhār to Phulcharī, which passes through the marts at Adamdīghi, Sukhānpukur, and Sonātalā. Other marts for rice are Dupchānchia and Burīganj on the Nāgar river, Sultānganj on the Karatoyā, and for jute Shāriākāndi, Naokhilā, Gosainbāri, and Dhunot. The jute is conveyed by boats along the numerous water-channels which intersect this part of the District and converge on SIRĀJGANJ, where it is baled for export. Most of the imports come from Calcutta, and comprise European piece-goods, gunny-bags, salt, and kerosene oil; tobacco is also imported from Rangpur. The largest trading castes are Telis and Sāhās, and the Mārwāris are increasing in number.

Railways. Bogra is well served by railways. The northern section of the Eastern Bengal State Railway (metre gauge) traverses the west of the District from south to north, and is protected by an embankment from the floods of the Jamunā. The Brahmaputra-Sultānpur Railway branches off at Sāntāhār, and, after passing through Bogra town, turns north-east and strikes the Brahmaputra at Phulcharī in Rangpur District.

Roads. Including 46 miles of village tracks, the District contains 384 miles of roads, all unmetalled; they are either bridged or possess ferries where they cross the rivers. The most important are those linking Bogra with Rangpur, Dinājpur, Sirājganj, Nator, and Sultānpur.

Water communications. In the east of the District the rivers form the chief means of communication. The Brahmaputra and the Bangāli are

navigable throughout the year, and the Karatoyā and the Nāgar are navigable by small boats up to the end of November. Numerous steamers ply on the Brahmaputra from Goalundo to Assam, and traffic by country boat is brisk everywhere. There are 24 ferries; the most important are those at Mahāsthān, Nāngla Bara Bīl, Jamālganj, and Fateh Alī.

Famine.

Bogra is not liable to famine; but in 1866, and again in 1874, some distress was caused by high prices, and relief operations were necessary.

Administration.

There are no subdivisions. The executive control is vested in a Magistrate-Collector, who is assisted by four Deputy-Magistrate-Collectors. The administrative head-quarters are at BOGRA TOWN, but one of the Deputy-Collectors is stationed at Khanjanpur and is manager of the Jaypur Government estates.

Civil and criminal justice.

For civil and criminal justice Bogra is amalgamated with Pābna, and the Sessions Judge of that District pays quarterly visits to Bogra. There are two Munsifs, with power to try suits up to the value of Rs. 1,000. Land disputes are responsible for the majority of the criminal cases.

Land revenue.

The revenue history presents no features of interest. The Joint-Magistrate of Bogra, who had been appointed in 1821, was vested with the powers of a Deputy-Collector in 1832, and ordered to collect the revenue of certain estates within his magisterial jurisdiction; but it was not until 1859 that he was raised to the status of Magistrate-Collector. The subsequent revenue history of Bogra is merely a narrative of interchanges of estates between Bogra and the neighbouring Districts, which have gone on up to the present time. The current land revenue demand in 1903-4 was 4·91 lakhs, payable by 706 estates, all permanently settled with the exception of two Government estates paying Rs. 58,000. The incidence of the revenue is R. 0-12-1 on each cultivated acre, and is equivalent to 24 per cent. of the rental. The rent per acre for rice land in the clay soil in the west varies from Rs. 6 to Rs. 15, and in the low land in the east from Rs. 9 to Rs. 15. The rate for jute land varies from Rs. 9 to Rs. 15 in the west, and from Rs. 9 to Rs. 21 in the east of the District, while for special crops, such as *pān* (*Piper Betle*), as much as Rs. 30 per acre is paid. Some under-ryots hold lands under the *chukāni* system, paying a fixed quantity instead of a fixed proportion of the produce. The only estates which have been brought under survey and settlement are the Jaypur Government estates. An area of 22,223 acres was settled with 5,969

ryots for Rs. 51,068, the average area of a ryot's holding being 3·9 acres and the assessment Rs. 2–4–9 per acre. The highest rates assessed were Rs. 4–8 for low and Rs. 3–12 for high lands, and the lowest rates were 12 annas for high and 8 annas for low lands; the rates paid by under-ryots were, however, much higher.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	4,60	5,03	4,90	4,92
Total revenue . . .	6,44	7,88	8,62	8,96

Local and municipal government.

Outside the municipalities of BOGRA and SHERPUR, local affairs are managed by the District board. In 1903–4 the income of the District board was Rs. 1,09,000, of which Rs. 51,000 was derived from rates; and the expenditure was Rs. 1,04,000, including Rs. 67,000 spent on public works.

Police and jails.

The District contains 8 *thānas* or police stations and 3 outposts. The police force under the District Superintendent consisted in 1903 of 2 inspectors, 20 sub-inspectors, 15 head constables, and 166 constables, in addition to 26 town *chaukīdārs*. The rural police force is composed of 149 *daffadārs* and 1,641 *chaukīdārs*. The District jail at Bogra town has accommodation for 127 prisoners.

Education.

The great majority of the population are illiterate, only 5 per cent. of the total (9·6 males and 0·3 females) being able to read and write in 1901. A considerable advance has, however, been made in recent years. The total number of pupils under instruction increased from 3,540 in 1881–2 to 11,819 in 1892–3 and 16,335 in 1900–1, while 18,130 boys and 617 girls were at school in 1903–4, being respectively 27·6 and 1 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 495: namely, 34 secondary, 425 primary, and 36 special schools. The expenditure on education was Rs. 79,000, of which Rs. 7,000 was met from Provincial funds, Rs. 18,000 from District funds, Rs. 700 from municipal funds, and Rs. 40,000 from fees.

Medical.

In 1903 the District contained 9 dispensaries, of which 3 had accommodation for 26 in-patients. At these the cases of 53,000 out-patients and 227 in-patients were treated during the year, and 1,676 operations were performed. The expendture was Rs. 13,000 and the income Rs. 14,200, of

which Rs. 1,900 was derived from Government contributions, Rs. 6,000 from Local and Rs. 1,300 from municipal funds, and Rs. 5,000 from subscriptions.

Vaccination is compulsory only in the two municipalities. It is not popular with the illiterate Muhammadan community, but their opposition to it is yearly becoming weaker. In 1903–4 the number of successful vaccinations was 25,000, or 30 per 1,000 of the population. Vaccination.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. iii (1876); S. S. Day, *Final Report on the Survey and Settlement of the Jaypur Estates* (Calcutta, 1899).]

Bogra Town (*Bagurā*).—Head-quarters of Bogra District, Eastern Bengal and Assam, situated in 24° 51′ N. and 89° 23′ E., on the west bank of the Karatoyā river. Population (1901), 7,094. Bogra was constituted a municipality in 1876. The income during the decade ending 1901–2 averaged Rs. 15,000, and the expenditure Rs. 14,000. In 1903–4 the income was Rs. 21,000, of which Rs. 4,000 was derived from a tax on persons (or property tax) and Rs. 6,000 from a conservancy rate; and the expenditure was Rs. 16,000. The Brahmaputra-Sultānpur branch of the Northern Bengal State Railway passes through the town. Bogra possesses the usual public buildings, and a park, containing a theatre, has recently been laid out. The District jail has accommodation for 127 prisoners, the chief jail industry carried on being the preparation of bamboo matting.

Hilli.—Village in Bogra District, Eastern Bengal and Assam, situated in 25° 17′ N. and 89° 1′ E., on the old Jamunā river and on the northern section of the Eastern Bengal State Railway. Population (1901), 1,047. It is a large rice and jute mart, goods being transported by both river and railway.

Mahāsthān.—Ancient shrine and fort in Bogra District, Eastern Bengal and Assam, situated in 24° 57′ N. and 89° 21′ E., on the west bank of the Karatoyā river, 7 miles north of Bogra town. It is the traditional capital of a monarch, named Parasu Rāma, who ruled over twenty-two feudatory princes, and who is identified by the Brāhmans with the sixth incarnation of Vishnu. The existing remains consist chiefly of the ruins of a fort which was constructed after the Muhammadan occupation. There are reasons for believing that they mark the site of a group of Buddhist *stūpas*, and that Mahāsthān was the capital of Pundra or Paundravardhana, the country of the Pods, lying between the Karatoyā and Mahānanda, which was in existence in the third century B.C., and was still flourish-

ing in the seventh century A. D. when Hiuen Tsiang travelled in India. Under the later Hindu kings, who favoured the worship of Siva and Vishnu in preference to Buddha, part of Mahāsthān obtained the name of Sīla Dwīpa. An ancient grant of about 650 acres from the Delhi emperor, subsequently confirmed by the Mughal governor of Dacca in 1666, still supports a fraternity of *fakīrs*, and a fair is held here in April. Coins dating from 1448 have been discovered, and the place affords a promising site for archaeological excavation.

[Cunningham, *Reports, Archaeological Survey of India*, vol. xv, pp. 104–17.]

Sherpur.—Town in Bogra District, Eastern Bengal and Assam, situated in 24° 40′ N. and 89° 26′ E. Population (1901), 4,104. Sherpur is mentioned in the *Ain-i-Akbarī* in 1595 as the site of a fort called Salīmnagar, named in honour of Salīm, the son of Akbar, afterwards famous as the emperor Jahāngīr. It was an important frontier post of the Muhammadans before they established their capital at Dacca; and Akbar's Hindu general, Rājā Mān Singh, is said to have built a palace here. It is referred to by old writers as Sherpur Murcha, to distinguish it from Sherpur in Mymensingh, and is marked in Van Den Broucke's map (1660) as Ceerpoor Mirts. It formerly possessed a large number of brick houses, but has suffered severely in recent earthquakes. Sherpur was constituted a municipality in 1876. The income during the decade ending 1901–2 averaged Rs. 6,800, and the expenditure Rs. 6,600. In 1903–4 the income was Rs. 8,500, mainly from a tax on persons (or property tax) and a conservancy rate; and the expenditure was Rs. 7,500.

Boundaries, configuration, and river system.

Pābna District.—District in the south-east corner of the Rājshāhi Division, Eastern Bengal and Assam, lying between 23° 49′ and 24° 45′ N. and 89° 1′ and 89° 53′ E., with an area of 1,839 square miles. It lies within the angle formed by the confluence of the Ganges or Padmā and the Brahmaputra or Jamunā, which constitute its southern and eastern boundaries, the latter separating it from Mymensingh and Dacca and the former from Nadiā and Farīdpur; on the west and north-west it is bounded by Rājshāhi, and on the north by Bogra.

The general aspect is low and flat. The head-quarters subdivision, which forms the south-western half of the District, is, like the adjoining portion of Rājshāhi, an area of silted-up river beds, obstructed drainage, and marshy swamps. The Sirājganj subdivision, on the other hand, more closely resembles

the neighbouring portion of Bogra, in that the drainage is not so much impeded by the high banks of deserted river-beds.

The river system is constituted by the PADMĀ and the BRAHMAPUTRA, together with their interlacing offshoots and tributaries. The chief offshoot of the Padmā is the ICHĀMATĪ (1), which flows past the town of Pābna. The Hurāsāgar, which represents the partially dried-up channel of an old river, is now the principal offshoot of the Jamunā. In its course it meets the Phuljhur, and, after joining the Baral and Ichāmatī, ultimately reunites with the Jamunā. The whole District is intersected by a network of minor watercourses, which render every part of it accessible by water during the rainy season, and is seamed by deserted beds of large rivers which are generally dry except in the rains. Alluvion and diluvion are constantly taking place, the river channels perpetually swinging from side to side of their sandy beds.

Deep swamps abound; but the only sheets of water which can be called lakes are the CHALAN BĪL, which covers large portions of the Raiganj and Chātmohar *thānas*, and the Bara, Sonāpātila, Gājna or Gandhahasti, and Ghugudah *bīls*, which are respectively 12, 6, 12, and 4 square miles in area.

The District is covered by recent alluvium, consisting of sandy clay and sand along the course of the rivers, and fine silt consolidating into clay in the flatter parts of the river plain. Geology.

Where the ground is not occupied by the usual crops of North Bengal, it is covered with an abundant natural vegetation. Deserted river-beds, ponds and marshes, and streams with a sluggish current have a copious vegetation of *Vallisneria* and similar plants. Land subject to inundation has usually a covering of *Tamarix* and reedy grasses; and in some parts, where the ground is more or less marshy, *Rosa involucrata* is plentiful. Few trees occur on these inundated lands; the most plentiful and largest is *Barringtonia acutangula*. There are no forests; trees are few in number and often stunted in growth, and the waste land is, for the most part, covered with grasses such as *Imperata arundinacea* and *Andropogon aciculatus*. Among the trees, the most conspicuous are the red cotton-tree (*Bombax malabaricum*) and the jack-tree (*Artocarpus integrifolia*). The villages are often embedded in thickets or shrubberies of semi-spontaneous and more or less useful trees. Botany.

Leopards and wild hog are common; the latter are numerous and of large size, and 'pig-sticking' has long been a favourite sport of European residents and visitors. Fauna.

Temperature and rainfall.

The climate is very equable. The mean temperature increases from 64° in January to 83° in April; it then remains almost constant till September, and falls to 72° in November and to 65° in December. The highest average maximum is 94° in April, the lowest average minimum 51° in January, and the average mean for the year 77°. Rainfall is seldom excessive; the annual fall averages 61 inches, of which nearly 8 inches fall in May, 11 inches in each of the months of June, July, and August, and 9 inches in September.

Natural calamities.

Heavy floods occurred in the head-quarters subdivision in the years 1888, 1889, and 1890, when the roads in Pābna town were seriously damaged. Cyclones are not uncommon; in September, 1872, a violent storm swept over the District, which levelled native houses and fruit trees in all directions, sunk more than 100 country boats at Sirājganj, and wrecked several large steamers and flats. The earthquake of 1885 did considerable damage to masonry buildings, but the shock of 1897 was still more severely felt. At Sirājganj the upper storey of the subdivisional office, the jail, and the post office were wrecked, and almost every other masonry building was more or less severely shaken. In Pābna town also brick buildings were much damaged. Fissures opened, and sand was thrown up in various places, while many wells were choked.

History.

Cunningham conjectured that the name of Pābna is derived from the old kingdom of Pundra or Paundravardhana, the country of the Pods, whose capital was at MAHĀSTHĀN in the adjoining District of Bogra. The recent history of the District is practically the same as that of RĀJSHĀHI, from which it was separated in 1832, when the need for a more efficient administration was beginning to demand recognition. In that year a Joint-Magistrate was stationed at Pābna town; but he remained partly subordinate to the Collector of Rājshāhi, and many of the landowners long retained the privilege, as it was deemed, of paying their revenue into the Rājshāhi treasury. It was not until 1859 that the covenanted official in charge of Pābna received the full title of Magistrate-Collector. In 1845 the subdivision of Sirājganj was formed, and it has since developed into by far the most important portion of the District. Frequent changes have taken place in the limits of Pābna. In 1862 the large subdivision of Kushtia, south of the Padmā, was transferred to Nadiā, and in 1871 the river was constituted the southern boundary of the District.

Pābna is notorious for the agrarian riots of 1873; and though these disturbances were rapidly suppressed, and never assumed

a serious character, they are important because they led to the exhaustive discussion of tenant-right which culminated in 'the ryots' Charter,' the Bengal Tenancy Act of 1885. The quarrel arose owing to the purchase by absentee *zamīndārs* of lands which had formerly belonged to the Nator Rājā. From the first the relations between the new-comers and their ryots were unfriendly; the *zamīndārs* attempted to enhance rents and also to consolidate customary cesses with the rent, and disputes arose over the proper length of the local measuring-pole. In 1873 the tenantry banded themselves together into leagues pledged to resist oppression, which gradually assumed the form of a 'no rent' agitation. The combination spread throughout the District and beyond its limits, and led to serious breaches of the peace. Prompt action was, however, taken, and the disturbances were suppressed in a fortnight with the help of armed police.

The people.

The population of the present area increased from 1,210,470 in 1872 to 1,310,604 in 1881, 1,361,223 in 1891, and 1,420,461 in 1901. The Sirājganj subdivision is healthy; but the drainage is obstructed in the south-west of the District, which was devastated by fever epidemics a quarter of a century ago and is still notoriously unhealthy, the vital statistics uniformly showing an excess of deaths over births. Deaf-mutism is prevalent in the Sirājganj subdivision.

The chief statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Pābna . .	882	1	1,658	586,749	665	− 2.1	30,356
Sirājganj . .	957	1	2,062	833,712	871	+ 9.4	37,118
District total	1,839	2	3,720	1,420,461	772	+ 4.8	67,474

The two towns are PĀBNA, the head-quarters, and SIRĀJGANJ. The density of population is greater than in any other District of North Bengal. The south-west of the District is unhealthy and decadent, except in the Pābna *thāna*, where the growing importance of SĀRA, the terminus of the northern section of the Eastern Bengal State Railway, has led to a rapid growth of the population. In Sirājganj the greatest development took place in the Raiganj *thāna* (11.6 per cent.), where immigrants from Chotā Nāgpur, locally called Bunās, are busy clearing the jungle. The jute trade at Sirājganj attracts a large number

of up-country labourers, especially from the United Provinces. The vernacular of the District is the dialect known as Northern Bengali. Muhammadans number 1,062,914, or almost exactly three-fourths of the population; Hindus with 357,065 account for practically all the remainder.

Castes and occupations. The Musalmāns are returned chiefly as Shaikhs (928,000), Jolāhās (84,000), and Kulus (25,000), who are probably all the descendants of local converts from the lower Hindu castes. Among the Hindus Namasūdras or Chandāls, with a strength of 49,000, constitute the most numerous caste; and next come Mālos (32,000), Kāyasths (30,000), and Sunris (28,000). Of the whole population 68·1 per cent. are supported by agriculture, 16·8 per cent. by industry, 1·2 per cent. by commerce, and 1·7 per cent. by the professions.

Christian missions. Two Christian missions are at work, the South Australian Baptist Mission at Pābna and the Tasmanian Baptist Mission at Sirājganj; but neither has made much progress in proselytism. The number of native Christians in 1901 was only 40.

General agricultural conditions. The soil is enriched by annual deposits of silt from the Padmā and Jamunā rivers, and is consequently extremely fertile. No less than two-thirds of the net cropped area is estimated to yield two crops annually, and many lands yield three crops in the year.

Chief agricultural statistics and principal crops. The chief agricultural statistics for 1903–4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Pābna	882	577	56
Sirājganj	957	654	61
Total	1,839	1,231	117

Rice, which is cultivated over an area of 1,081 square miles, constitutes the staple crop throughout the District. Of the total food-supply, the winter rice forms about three-fifths and the early rice a seventh, while most of the remainder is furnished by cold-season second crops, such as pulses, which are grown on 226 square miles. Early and winter rice are sown in April and May, the former being usually grown on high lands and the winter and spring crops on low lands, but the early and winter crops are sometimes grown on the same class of land and even together. The early rice is reaped in August and September, while the winter rice is not garnered till November, December, or January. Of recent

years jute has risen into the second place in the District agriculture, and now covers 219 square miles. Rape, mustard, and other oilseeds are extensively cultivated, and some sugar-cane, wheat, barley, and other miscellaneous food-crops are also grown. The cultivators are prosperous, and as a rule there is little need for advances under the Land Improvement and Agriculturists' Loans Acts; but Rs. 21,000 was advanced under the former and Rs. 2,500 under the latter Act in 1897–8, when there was a partial crop failure.

Cattle.

The local cattle are small and poor, and there is a great dearth of good pasture. Two up-country bulls have been introduced by Government for breeding purposes.

Arts and manufactures.

Since the closing of the jute-mills at Sirājganj, the manufacture of gunny cloths and bags has ceased; but in spite of the extensive importation of cheap European piece-goods, several kinds of cotton cloth are still woven by hand, and as recently as 1890 the out-turn of the fine cotton and silk fabrics from Chotadhul and Dogāchi was valued at 2½ lakhs. These fabrics compare with those of Dacca, Farāsdānga, Sāntipur, and other historic seats of the industry; and well-to-do people prefer them to machine-made cloth because of their finer texture. Fine grass and reed mats made of *sītalpāti* (*Phrynium dichotomum*) are extensively prepared, and are exported to neighbouring Districts. Pottery and brass and bell-metal articles are also made to a small extent. The country paper industry at Kalitā has almost died out, killed by competition with the Bally and other paper-mills. In the village of Chātmohar thirty or forty persons are employed on the manufacture of shell bracelets. SIRĀJGANJ is the chief seat of the jute-baling industry in North Bengal, and 14 presses are employed there; there are also 5 presses at BERĀ.

Commerce.

A large amount of trade passes through the District, the agricultural produce of neighbouring Districts being exchanged here for salt, piece-goods, and other European wares. Otherwise the trade is almost entirely with Calcutta. The chief exports are jute, of which 72,000 tons were exported in 1903–4, rice, pulses, and mustard. Quantities of loose jute are brought from Rangpur, Mymensingh, and Bogra to the presses at Sirājganj, where it is pressed into bales for export via Calcutta. The principal imports are European piece-goods, salt, and kerosene oil from Calcutta, rice from Dinājpur and Bogra, and tobacco from Rangpur. The most important trade centres are PĀBNA TOWN, SIRĀJGANJ, BERĀ, Ulāpāra on the Hurāsāgar, Dhāpāri on the Padmā, and Pāngāsi on the Ichāmatī. The

chief trading castes are Sāhās, Tāntis, and Telis, who are among the wealthiest residents in Pābna town; but at Sirājganj the principal native merchants are Mārwāris. Seven European firms are engaged in the jute business at Sirājganj and two at Berā. The greater portion of the Calcutta trade is dispatched by country boat or steamer via the Sundarbans; but a considerable quantity of jute is also consigned to Kushtia or Goalundo, whence it is carried by the Eastern Bengal State Railway.

Railways. The only railway which touches the District is the northern branch of the Eastern Bengal State Railway (metre gauge), which runs across its south-western corner for about 5 miles to the terminus at SĀRA on the north bank of the Padmā.

Roads. Including 246 miles of village tracks, the District contains 881 miles of roads maintained by the District board, of which only 7½ miles are metalled. The many rivers, *bīls*, marshes, and low lands render it impossible, without very great expense, to construct proper roads, and most of those that exist are little more than tracks. A raised road from Pābna to Sāra can, however, be used throughout the year; and a metalled road, 2½ miles in length, leads from Pābna to Bājitpur on the Padmā. Most of the *thānas* are connected with Pābna by raised roads, though there are breaks in places owing to floods.

Water communications. These roads are little used as trade routes on account of the excellent water communications. Both the Padmā and the Brahmaputra are navigable by native boats of the largest size and also by steamers, and the Baral and the Hurāsāgar by boats of 4 tons burden throughout the year; the other minor watercourses are navigable during the rainy season. The Phuljhur, which was formerly navigable throughout its course, has formed shallows at Nalkā and Ulāpāra, which make it impassable for heavily laden craft. The Dhānbāndi, which passes through Sirājganj, is connected with the Simlā *khāl* and ultimately with the Jamunā by the Kāta *khāl*, and with the Pāngāsi river and the Phuljhur by the Telkupī *khāl*; these artificial channels are, however, navigable only during the rains. On the Brahmaputra a daily mixed service of steamers runs between Goalundo and Phulcharī Ghāt, calling for goods and passengers at several stations in the District, and the Goalundo-Assam mail stops at Sirājganj. The services which ply up the Padmā call at four stations: Nāzirganj, Sātbāria, Bājitpur (for Pābna town), and Sāra. A ferry steamer aided by a District board subsidy runs between Bājitpur and Kushtia, and there are 63 other ferries of less importance.

Pābna is not liable to famine; but in 1874 and again in 1897 there was some local scarcity, and relief works on a small scale were opened by Government. Famine.

For general administrative purposes the District is divided into two subdivisions, with head-quarters at PĀBNA and SIRĀJGANJ. At head-quarters the staff subordinate to the Magistrate-Collector consists of three Deputy-Magistrate-Collectors, one Sub-Deputy-Collector, and two *kānungos*. In charge of the Sirājganj subdivision is a covenanted civilian, assisted by a Deputy-Collector, a Sub-Deputy-Collector, and a *kānungo*. District subdivisions and staff.

The civil courts are those of the District and Sessions Judge, who also pays quarterly visits to Bogra, a Sub-Judge, an additional Sub-Judge, and two Munsifs stationed at Pābna, and two Munsifs and an additional Munsif at Sirājganj. The criminal courts include those of the Sessions Judge, District Magistrate, and the above-mentioned magistrates. Frequent disputes arise in connexion with the possession of the valuable lands which are continually being formed by the changes in the courses of the great rivers, and these often culminate in riots. The District is notorious for both land and river dacoities, and a large gang which had been a terror to traders for many years was broken up in 1900. Civil and criminal justice.

The early revenue history is that of RĀJSHĀHI DISTRICT. The current land revenue demand in 1903–4 was 4·06 lakhs, payable by 1,915 estates, of which 1,786 with a demand of 3·59 lakhs were permanently settled, 72 paying Rs. 23,000 were temporarily settled, and the remainder were managed direct by Government. The subdivision of real property has been going on rapidly; and there are now no less than 538 permanently settled estates which pay less than Rs. 10 as land revenue, and 754 which pay between Rs. 10 and Rs. 100. The incidence of land revenue is very light, being only R. 0–7–4 on each cultivated acre; and, although rents likewise rule low owing to the success with which the ryots have resisted enhancements, the land revenue is only 19 per cent. of the estimated rental payable to the *zamīndārs*. Rice lands pay from Rs. 2–4 to Rs. 4–3 an acre in the west of the District, and from Rs. 3 to Rs. 6 in Sirājganj. Jute lands are rented at from Rs. 6 to Rs. 9. Land revenue.

The table on the next page shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees.

Outside the municipalities of PĀBNA and SIRĀJGANJ, local affairs are managed by the District board, with subdivisional Local and municipal

government. local boards. In 1903–4 the income of the District board was Rs. 1,25,000, of which Rs. 57,000 was derived from rates; and the expenditure was Rs. 1,28,000, including Rs. 56,000 spent on public works and Rs. 40,000 on education.

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	3,90	3,91	4,00	4,06
Total revenue . .	7,33	8,55	10,04	10,49

Police and jails. The District contains 8 *thānas* or police circles and 8 outposts. In 1903 the police force subordinate to the District Superintendent consisted of two inspectors, 27 sub-inspectors, 27 head constables, and 349 constables; and the village watch consisted of 2,332 *chaukīdārs*, grouped in unions, under 209 *daffadārs*. The District jail at Pābna has accommodation for 257 prisoners, and a lock-up at Sirājganj for 34.

Education. Only 4·8 per cent. of the population (9 males and 0·4 females) could read and write in 1901. The total number of pupils under instruction decreased from about 23,500 in 1883–4 to 19,882 in 1892–3, but rose again to 24,513 in 1900–1, while 26,184 boys and 1,398 girls were at school in 1903–4, being respectively 24·6 and 1·3 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 660, including an Arts college, 64 secondary schools, and 571 primary schools. The expenditure on education was 1·75 lakhs, of which Rs. 14,000 was met from Provincial funds, Rs. 32,000 from District funds, Rs. 1,800 from municipal funds, and Rs. 1,04,000 from fees. The chief educational institutions, including a technical school, are at Pābna town.

Medical. In 1903 the District contained 12 dispensaries, of which 3 had accommodation for 50 in-patients. At these the cases of 65,000 out-patients and 742 in-patients were treated during the year, and 2,192 operations were performed. The expenditure was Rs. 20,000, of which Rs. 5,000 was met from Government contributions, Rs. 4,000 from Local and Rs. 3,000 from municipal funds, and Rs. 7,000 from subscriptions.

Vaccination. Vaccination is compulsory only in the municipalities of Pābna and Sirājganj. During 1903–4 the number of persons successfully vaccinated was 46,000, or 33 per 1,000 of the population. There has not been much progress in recent years, but cases of small-pox are rare.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. ix (1876).]

Pābna Subdivision.—Head-quarters subdivision of Pābna District, Eastern Bengal and Assam, lying between 23° 49′ and 24° 21′ N. and 89° 1′ and 89° 45′ E., with an area of 882 square miles. The population in 1901 was 586,749, compared with 599,319 in 1891. The subdivision is a tract of silted-up river-beds, obstructed drainage, and marshy swamps, and the decline of the population is due to the consequent unhealthiness of the climate. It contains one town, PĀBNA (population, 18,424), the head-quarters; and 1,658 villages. The density of population, 665 persons per square mile, is considerably less than in the adjoining subdivision of Sirājganj, where more favourable conditions prevail. The chief centres of trade are Pābna town and SARĀ.

Sirājganj Subdivision.—Subdivision of Pābna District, Eastern Bengal and Assam, lying between 24° 1′ and 24° 45′ N. and 89° 15′ and 89° 53′ E., with an area of 957 square miles. The subdivision is low-lying, but, except in the Raiganj *thāna* to the north, the drainage is not impeded by the high banks of dead rivers. It thus receives the benefit of an annual deposit of silt from the Jamunā; and when the floods subside, the water flows off readily and does not stagnate as it does farther east. The population in 1901 was 833,712, compared with 761,904 in 1891, showing an increase of 9·4 per cent. The subdivision contains one town, SIRĀJGANJ (population, 23,114), the head-quarters; and 2,062 villages. Unlike the rest of the District, it is healthy, and the population is rapidly increasing, the density in 1901 being 871 persons per square mile. The chief centres of trade are Sirājganj and BERĀ.

Berā.—Village in the Sirājganj subdivision of Pābna District, Eastern Bengal and Assam, situated in 24° 5′ N. and 89° 38′ E., at the junction of the Ichāmatī, Baral, and Hurāsāgar rivers. Population (1901), 1,675, and including its adjacent hamlets, 5,417. Berā is a market with a considerable trade, especially in jute, and two European firms have branches here.

Pābna Town.—Head-quarters of Pābna District, Eastern Bengal and Assam, situated in 24° 1′ N. and 89° 16′ E., on the Ichāmatī. Population (1901), 18,424. Pābna was constituted a municipality in 1876. The income and expenditure during the decade ending 1901–2 averaged Rs. 22,000 and Rs. 19,500 respectively. In 1903–4 the income was Rs. 31,000, of which Rs. 8,000 was derived from a tax on persons (or property tax), and Rs. 7,000 from conservancy rates; and the expenditure was Rs. 30,000. The town was formerly liable

to floods, but is now protected by an embankment, a mile in length, along the bank of the Ichāmatī. It contains the usual public buildings; a second-class jail has accommodation for 257 prisoners, the principal jail industries being oil-pressing, brick-making, *surki*-pounding, and carpet- and cloth-weaving. The chief educational institutions are the high school managed by Government; the technical school, at which engineering, surveying, drawing, and practical carpentry are taught; and the Pābna Institution with the status of a second-grade college.

Sāra.—Village in the head-quarters subdivision of Pābna District, Eastern Bengal and Assam, situated in 24° 6′ N. and 89° 3′ E., on the north bank of the Padmā. Population (1901), 3,011, including 2,004 persons enumerated within railway limits. Sāra is the terminus of the Eastern Bengal State Railway (northern section), and is connected by a steam ferry with Dāmukdia on the south bank of the river, and is consequently an important trade centre. It has been decided that the Ganges should here be bridged, to bring the tract north of the Padmā into direct railway communication with Calcutta without transhipment.

Sirājganj Town.—Head-quarters of the subdivision of the same name in Pābna District, Eastern Bengal and Assam, situated in 24° 27′ N. and 89° 45′ E., on the right bank of the Jamunā. Population (1901), 23,114, of whom 40 per cent. were Hindus and 59·5 per cent. Musalmāns, a small number of Jains and Christians forming the remainder. Sirājganj was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 21,000, and the expenditure Rs. 19,000. In 1903–4 the income was Rs. 20,000, of which Rs. 11,000 was derived from a tax on persons (or property tax), and Rs. 4,000 from a conservancy rate; and the expenditure was Rs. 19,000. Sirājganj is the largest town in North Bengal and the most important centre of the jute trade in this area. The raw product is brought in from West Mymensingh, Bogra, and East Rangpur, as well as from other parts of Pābna, and is here pressed into bales, which are either railed from Goalundo or shipped by river steamer to Calcutta. A large number of European firms do business at Sirājganj, and 14 factories are established here. It also collects the agricultural produce of Pābna and the neighbouring Districts for export to Calcutta, and distributes the imports of salt, piece-goods, and other European wares. The town possesses the usual public buildings; the sub-jail has accommodation for 34 prisoners. Sirājganj has of late somewhat

declined in importance owing to the damage done by the earthquake of 1897, and to a change in the course of the Jamunā or Brahmaputra, which is now 3 miles distant from the town. The jute-mills here, which were among the first to be established in Bengal, have also been closed since the earthquake. The population was thus rather less in 1901 than at the previous enumeration of 1891.

DACCA DIVISION

Dacca Division (*Dhāka*).—Division of Eastern Bengal and Assam, extending from the Gāro Hills to the sea, and lying between 21° 49′ and 25° 26′ N. and 89° 19′ and 91° 16′ E. On the east the Surmā and the Meghnā, and on the west the Madhumatī, with its continuations the Baleswar and the Haringhāta, form the general lines of boundary. The head-quarters of the Commissioner are at DACCA CITY. The Division includes four Districts, with area, population, and revenue as shown below:—

District.	Area in square miles.	Population, 1901.	Demand for land revenue and cesses, 1903-4, in thousands of rupees.
Dacca	2,782	2,649,522	7,27
Mymensingh	6,332	3,915,068	12,73
Farīdpur	2,281	1,937,646	7,51
Backergunge	4,542	2,291,752	21,60
Total	15,937	10,793,988	49,11

The recorded population increased from 7,597,500 in 1872 to 8,707,040 in 1881, 9,845,296 in 1891, and 10,793,988 in 1901, when the density was 677 persons per square mile, a very high figure. In 1901 no less than two-thirds of the population were Muhammadans and nearly one-third Hindus; Animists numbered 29,000, Christians 23,000 (of whom 21,500 were natives), and Buddhists 7,000. The principal caste is that of the Namasūdras or Chandāls, whose home is in the swamps of the delta, and whose numbers, in spite of wholesale conversions to Islām, still exceed a million.

The Division is watered by the three great converging river systems of the BRAHMAPUTRA, the PADMĀ, and the MEGHNĀ, and, with the exception of the Susang hills which rise on the northern boundary of Mymensingh, forms one wide alluvial plain; a slightly elevated tract of older alluvial formation, known as the MADHUPUR JUNGLE, extends down the centre of Mymensingh and Dacca Districts as far south as Dacca city. Famine is almost unknown in the Division; the rains

rarely fail and, thanks to the great fertility of the soil, on which immense crops of rice and jute are grown, the peasantry are the most prosperous in Bengal. The Division contains 17 towns and 26,928 villages, the largest towns being DACCA CITY (population, 90,542) and NĀRĀYANGANJ (24,472). The chief places of commercial importance are Dacca, Nārāyanganj, and JHĀLAKĀTI, and a considerable amount of trade passes through GOALUNDO.

There are ruins at BIKRAMPUR, at one time the head-quarters of the Sen dynasty, and at SONĀRGAON, the first capital of the Muhammadans in Eastern Bengal; and ancient legends also attach to remains at RĀMPĀL, DURDURIA, SĀBHĀR, and elsewhere. In more recent times, Dacca city was the Muhammadan capital, and it is a town of considerable historical interest.

Boundaries, configuration, and river system.

Dacca District (*Dhāka*).—District in Eastern Bengal and Assam, lying between 23° 14′ and 24° 20′ N. and 89° 45′ and 90° 59′ E., with an area of 2,782 square miles. It is bounded on the south-west by the Padmā, which separates it from Farīdpur; and on the east by the old bed of the Brahmaputra (here called the Meghnā), which divides it from Tippera; Mymensingh forms the northern boundary; and at the north-west angle the Brahmaputra (or Jamunā) separates it from Pābna District.

Dacca is at once the type and the metropolis of Eastern Bengal. A wedge of friable soil, thrust in between the converging waters of the PADMĀ or modern channel of the Ganges and the MEGHNĀ, it is subject to all the vicissitudes of alluvion and diluvion, as well as to the periodic inundation and silt fertilization which are characteristic of this fortunate part of the Province. A century ago the BRAHMAPUTRA flowed past the eastern border of the District, and its confluence with the Padmā took place at the southern apex; but the channel has now swung to the west, and it meets the Padmā at Goalundo, at the north-west corner of the District, the united waters sweeping past its south-western face, before entering the Bay through the Meghnā estuary. Dacca is a level plain broken only by the MADHUPUR JUNGLE, a stiff layer of red ferruginous clay, which rises in low ridges above the newer alluvium and extends across the border into Mymensingh. This formation is of considerable depth and offers much resistance to the erosive action of the rivers; and when the Brahmaputra, towards the end of the eighteenth century, had raised its eastern channel and was compelled to find another outlet, it was the stiff clay of the Madhupur Jungle which forced it to break

westwards and join the Padmā at Goalundo. The scenery in this part is wild, and the deep gorges cut by the Bansi and the Lakhyā rivers through the forest-clad uplands are very beautiful.

Forming the focus of three great river systems, Dacca is essentially a water District, and during July and August, when the rivers are swollen by the rainfall and melting of the Himālayan snows, the greater part of the surface is submerged. The Padmā, after receiving the waters of the Brahmaputra (or Jamunā), eventually discharges its volume into the Meghnā through a channel 2 miles wide, known as the Kīrtināsā. The Dhaleswari is a very old channel and was apparently a continuation of the Karatoyā and Atrai, from which it was severed at the end of the eighteenth century by the Brahmaputra. In recent years it has been fed by three channels from the Brahmaputra (or Jamunā) in the south-western corner of Mymensingh, and flows through Dacca District in a southeasterly direction, parallel with the Padmā, and, after receiving the Ichāmatī on its right bank, falls into the Meghnā below Munshiganj. The river is navigable by steamers below Sābhār, where it is joined by the Bansi. The Burhī Gangā is now an arm of the Dhaleswari, which it leaves just below Sābhār and rejoins, after flowing past Dacca city, a little above Nārāyanganj, the tract between the two rivers forming a large island known as Pārjoār. The Burhī Gangā is fed by the Turāg, which enters the District from Mymensingh and joins it 2 miles above Dacca city. The deterioration of the Dhaleswari, added to a tendency of the mouth to silt up, is threatening to ruin the Burhī Gangā as a navigable river, and so imperil the river trade of Dacca city. The Lakhyā leaves the Brahmaputra at the northern boundary of the District and flows southwards till it empties itself into the Dhaleswari, about 4 miles from the junction of that river with the Meghnā; it is a favourite route in the rains for boats plying between the Districts of Dacca and Mymensingh. The upper reaches now carry very little water in the dry season, especially since the earthquake of 1897, and are overgrown with weeds through which only the smallest boats can be pushed. The real channel, which at present feeds the lower reaches, is known as the Bānār river, and leaves the Brahmaputra about 12 miles west of the Lakhyā. The Balu, another tributary of the Lakhyā, which it joins also on the west bank about 10 miles north of its junction with the Dhaleswari, drains the marshes which are fed by the Tungī river, a branch of the Turāg. All these

rivers are more or less affected by the tide, and the Burhī Gangā rises and falls to the extent of 2½ feet at Dacca city. In the rains they rise in average years as much as 14 feet, the maximum recorded having been 17 feet in 1890.

The greater part of the District is covered by recent alluvial deposits, consisting of sandy clay and sand along the course of the rivers, and fine silt consolidating into clay in the flatter parts of the river plain. The ferruginous clay of the Madhupur Jungle belongs to an older alluvial formation. Geology.

The District contains no Government forests, but the Madhupur Jungle is covered with a dense growth of tall trees overrun by creepers, and with numerous large grasses at their base. The forest is similar in composition to those under the Himālayan range, containing a mixture of *Leguminosae*, *Combretaceae*, *Anacardiaceae*, *Urticaceae*, *Meliaceae*, and *Sapindaceae*. East of the Lakhyā the ground is lower and more subject to inundation, and here the laterite islands are mostly covered by scrub jungle, with numerous wild or semi-wild mango groves. In the north jack-trees (*Artocarpus integrifolia*) are common. The south of the District lies low and is inundated during the rainy season to a depth of from 8 to 14 feet, the water covering everything except the river banks and the artificial mounds on which the houses are built. This higher ground is, where not occupied by gardens, densely covered with a scrubby jungle of semi-spontaneous species, from which rise bamboos with a few taller trees, such as the *jiyal* (*Odina Wodier*) and the conspicuous red cotton-tree (*Bombax malabaricum*). The surface of the marshes either shows huge stretches of inundated rice, or is covered with matted floating islets of sedges and grasses and various water-lilies, the most striking being the *makana* (*Euryale ferox*). Botany.

Tigers and leopards are still found in the jungle, as also are wild hog and deer, including *sāmbar*, swamp deer, and barking-deer; but they are disappearing before the advance of cultivation. Fauna.

Temperature is uniform and a high degree of humidity prevails from April to October; the mean temperature remains at 84° from April to September, but falls in the cold season to 67°. Rainfall commences early and is heavy, the average annual precipitation being 72 inches, of which 9·6 inches fall in May, 12·7 in June, 13·5 in July, and 12·6 in August, rather less than 9 inches in September, and 4 inches in October. Temperature and rainfall.

Heavy floods have been frequent in recent years; but the highest recorded took place in 1787, when the streets of Dacca Natural calamities.

city were submerged to a depth sufficient to admit of boats sailing along them, and 60,000 persons perished during the inundation and subsequent famine. Immense loss of property was occasioned, and the lands, which relapsed into jungle owing to the loss of cultivators and cattle, took many years to recover. A serious earthquake occurred in April, 1762, when rivers and marshes were violently agitated, rising high above their usual level, and 500 persons are said to have lost their lives. The earthquake of 1897 did much damage in Dacca city, and the rivers and marshes in the north of the District underwent a further upheaval. An account will be found, in the article on DACCA CITY, of two recent tornadoes which wrought great havoc in the vicinity.

History. Authentic history begins with Musalmān chronicles, but many local legends and crumbling ruins bear witness to the power of prehistoric rulers. The Dhaleswari river originally formed the southern border of the kingdom of Kāmarūpa, the western boundary being the Karatoyā river. Mounds of earth and bricks are connected with the memories of Jasha Pāl at Dakuri, and of Haris Chandra Pāl at SĀBHĀR, while Sisu Pāl is said to have resided near Mahuna; these Pāl kings may have had some connexion with the Buddhist Pāl dynasty, which rose to power in Bengal early in the ninth century. South of the Dhaleswari lies the *pargana* of Bikrampur, called after the mythical Vikramāditya. Here the village of RĀMPĀL was the head-quarters of Hindu kings from the time of Vikramāditya till the Muhammadan rule began. Ballāl Sen, the most famous Hindu ruler of Bengal, held his court here; and at an earlier date it was under the rule of Adisur, who has been identified with the founder of the Sen dynasty.

The Muhammadans first entered Bengal in 1199; and, though East Bengal was not subdued till later, there is a tradition that *kāzīs* were appointed, and the tomb of Bābā Adam near Ballālbāri probably dates from about this period. In 1296 the great Alā-ud-dīn became emperor of Delhī, and he divided Bengal into two provinces, making Bahādur Shāh governor of the south-east, with his head-quarters at SONĀRGAON, a town near the banks of the Meghnā, 15 miles east of the modern Dacca. In 1330 the emperor Muhammad bin Tughlak established three provinces, and Tātār Bahrām Khān became governor of Sonārgaon. In 1351, when Bengal was united under Shams-ud-dīn, Sonārgaon was still the residence of the governor. In 1608 Shaikh Islām Khān was appointed governor of Bengal, and he moved the capital from Rājmahāl to Dacca, a measure dictated

by military considerations. The eastern frontier of Bengal was then exposed to the ravages of numerous warlike invaders: the Ahoms from Assam raided the north of the District, while from the south the Maghs or Arakanese, in alliance with Portuguese pirates, harried the country and rendered all the waterways unsafe. The Mughal viceroys protected their frontier by maintaining a powerful fleet, which was largely officered by Portuguese, and distributed colonies of veterans on feudal holdings throughout the country. Mīr Jumla became governor of Bengal in 1660, and his viceroyalty was the most flourishing era in the history of Dacca. To guard against the invasions of the Maghs, he built several forts at the confluence of the Lakhyā and Dhaleswari, the ruins of which are still to be seen; Hājīganj is now in possession of the Nawāb of Dacca, and Idrakpur is the residence of the subdivisional officer of Munshiganj. Shaista Khān, nephew of the empress Nūr Jahān, succeeded Mīr Jumla. He was the viceroy who added Chittagong to the empire, and he it was who, under the orders of Aurangzeb, confiscated the English factories and put the commercial agents at Dacca in irons. Both these governors are remembered for their encouragement of architecture and public works, and Shaista Khān has given his name to a well-known style of architecture in the city.

The political downfall of Dacca dates from 1704, when Murshid Kulī Khān transferred the seat of Government to Murshidābād. Dacca was subsequently governed by a *naib* or deputy of the viceroy, with a jurisdiction considerably more extensive than the present Dacca Division. On the establishment of the British power in 1757, the office of *naib* became an empty title, but it was continued in the family of the last representative until 1845.

At the time of the Permanent Settlement, the Dacca Collectorate included also the now separate Districts of Backergunge and Farīdpur. Mānikganj subdivision was transferred from Farīdpur in 1858 and the Mulfatganj *thāna* to Backergunge in 1867.

The people.

The population of the present area increased from 1,827,931 in 1872 to 2,090,877 in 1881, 2,395,430 in 1891, and 2,649,522 in 1901. With the exception of the west of the Mānikganj subdivision, which is extremely malarious, the District is healthy and the people are very prosperous; but the population is now so dense in most parts that it is scarcely likely that it will continue to grow as rapidly as it has done hitherto.

The principal diseases are malarial fever, skin diseases, worms, dyspepsia, dysentery, diarrhoea, diseases of the spleen, respiratory affections, and, in some parts, elephantiasis. Two-thirds of the deaths reported are attributed to fever and about one-eighth to bowel complaints and cholera, of which there have been several local epidemics in recent years.

The chief statistics of the Census of 1901 are shown in the following table:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Dacca . .	1,266	1	2,647	881,517	696	+ 11·4	57,876
Nārāyanganj	641	1	2,177	660,712	1,031	+ 15·0	35,079
Munshiganj .	386	...	978	638,351	1,654	+ 9·9	57,125
Mānikganj .	489	...	1,461	468,942	959	+ 4·5	23,265
District total	2,782	2	7,263	2,649,522	952	+ 10·6	173,345

The two towns are DACCA CITY and NĀRĀYANGANJ. The density of population is far greater than elsewhere in Bengal; and the figure would be still higher but for the Madhupur Jungle, where the population, though growing rapidly, is still comparatively sparse. The Srīnagar *thāna* of the Munshiganj subdivision supports 1,787 persons to the square mile. A considerable temporary emigration takes place among the poorer classes to assist in agricultural operations in Backergunge, but this is partly counterbalanced by a similar immigration from the United Provinces and Bihār (especially Monghyr). The immigrants are attracted by the jute industry in the rainy season, while in the cold season they scatter over the District and find employment as earthworkers, fishermen, boatmen, street coolies, and *pālki*-bearers. A very large number of males of the educated castes find employment elsewhere in clerical service or in business, and there is consequently a preponderance of females among the Kāyasths and Sāhās enumerated in the District. Bengali is the vernacular, but Hindustāni is spoken by up-country immigrants, and by a large number of respectable Muhammadan families. The Muhammadans numbered 1,650,000 in 1901, or more than three-fifths of the population, and Hindus 988,000, or 37 per cent.

Castes and occupations.

The majority of the Muhammadans are Shaikhs (1,556,000), most of whom are doubtless the descendants of converts from Hinduism. Namasūdras (236,000), who supply nearly

a quarter of the total Hindu population, are probably the remains of an aboriginal race, and it is to this caste that the ordinary Dacca Musalmān appears to be akin by origin. Another aboriginal tribe is that of the Koch of the Madhupur Jungle, who have worked their way down from their old home on the banks of the Sankosh river. Of the common functional castes of Bengal, the most important, though not numerically the strongest, is the weaving caste of Tāntis; they are divided into two rival classes, whose annual processions on the occasion of the Janmāstami festival still constitute a gorgeous and unique spectacle, recalling mediaeval customs. The three great literary castes, the Brāhmans (66,000), Kāyasths (86,000), and Baidyas (11,000), are well represented. The last named, though the least numerous, are the most highly educated; two-thirds of their males and one quarter of their females are literate, and one-third of their males know English. The Sāhās, the chief trading caste, are also numerous (71,000), and their advance in education, wealth, and social position has been marked in recent years. Europeans number 205, the majority of them being employed in the jute trade in Dacca city and Nārāyanganj. Of the total population 65·3 per cent. are supported by agriculture, 18·6 per cent. by industries, 1·8 per cent. by commerce, and 2·6 per cent. by the professions.

Christian missions.

Dacca contains an exceptionally large number of Christians (12,000). Most of these are Roman Catholics, and they are nearly all native converts, though some are descendants of the renegade Portuguese who entered the service of the Arakanese and were transferred, about 1664, by the Nawāb Shaista Khān from Chittagong to Dacca. There they settled in the town of Firinghī Bāzār, 12 miles from Dacca city, and some of their descendants are also to be found in the Nawābganj *thāna*. They have interbred largely with natives, and are locally known as Firinghīs or Franks.

Portuguese missions of the Roman Catholic Church have been settled in the District for three centuries. The church of Tezgaon, near Dacca, is said to have been founded by St. Augustine missionaries prior to 1599; but it has been thought, from its resemblance to early places of worship in the South of India, that it was built at a still earlier date and was only repaired or rebuilt by the Portuguese missionaries. The burial-ground attached to the church contains a tombstone dated 1714. There is now a resident priest, with a congregation of 215 native Christians. The church at Nāgari, in Bhawāl, which was built in 1664, belongs to another early mission, and has a

community of 1,500 native Christians with a resident priest. Another mission at Hāsnābād in the Nawābganj *thāna* was founded in 1777, and has two resident priests and a congregation of 2,518; 757 native Christians in an adjacent village also belong to it. These missions, together with one in Dacca city with two priests and a flock of 120, are all under the jurisdiction of the Bishop of Mylapore. In the beginning of the nineteenth century, the Roman Propaganda began a work of revival. The Portuguese missionaries, whose head-quarters were at Goa, opposed this, and a schism took place; and as a result there is another Roman Catholic Church in Dacca under the Bishop of Dacca. Included in his see are several missions with an aggregate number of 7,000 converts. The English Baptist Missionary Society commenced work in 1816 and has made some 200 converts, and the Oxford Mission has recently opened a branch at Dacca.

General agricultural conditions.

The climate, the soil, and the river systems are all favourable to agriculture, and the copious rainfall precludes the necessity for artificial irrigation, except to a small extent in the undulating uplands of the Madhupur Jungle. The greater part of the District is flooded annually, and the long-stemmed rice, which is the principal crop, is thus practically independent of the rainfall after the first few weeks of its growth; moreover, the flood-water enriches the soil with a thick deposit of silt. From an agricultural point of view the District may be divided into four tracts: Bhāwāl corresponding to the Madhupur Jungle, the tract between the Lakhyā and the Meghnā rivers, the remainder of the interior, and the mud flats along the great rivers. In the first, autumn rice, jute, and winter crops grow on the high lands, transplanted rice on the lower elevations, and spring rice on the edges of rivers and marshes. The second is the great jute tract. In the third, winter rice and *rabi* crops, including oilseeds, are grown; and in the fourth, autumn rice, jute, oilseeds, and pulses, and, in the moist land, spring rice.

Chief agricultural statistics and principal crops.

The chief agricultural statistics for 1903–4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Dacca . .	1,266	808	50
Nārāyanganj .	641	422	30
Munshiganj. .	386	273	21
Mānikganj . .	489	376	26
Total	2,782	1,879	127

Of the cultivated area 19 per cent. produces more than one

crop during the year. Rice is grown on 1,390 square miles and is the staple food-crop; the most common variety is harvested in the winter, but early rice and spring rice are also largely cultivated. The winter rice is sown broadcast in Munshiganj and Mānikganj, but elsewhere the seedlings are transplanted; the soil is prepared by repeated ploughings from December to February, and seed is sown after the first fall of rain. This rice grows very rapidly, and in swamps during the rainy season frequently shoots up 12 inches in twenty-four hours as the inundation rises. A high and sudden rise of water, however, is apt to overtop the plant, and if it does so for long, the crop is lost. The early variety, which like the winter rice is sown in March, April, and May, is scattered broadcast on the higher lands and is of rapid growth, being reaped in June, July, and August. Early and winter rice are frequently sown together, and mustard is sometimes sown on winter rice lands before that crop is reaped. For the spring rice, the seed, which has first been allowed to germinate, is sown in the cold season in deep marshy ground and newly formed mud flats, and afterwards transplanted; it is reaped in April and May. A fourth variety is a kind of rice known as *uri* or *jārādhān*, which grows spontaneously in marshes and is gathered by the poorer people. Dacca is one of the most important jute-growing Districts in Bengal and produces several varieties (*karīmganji*, *bakrābādi*, and *bhātiāl*) well-known in the market; the area under cultivation has increased fourfold during the last thirty years, and jute is now, after rice, the most important crop, covering 267 square miles. It is generally sown in April or May, after the cold-season crops have been reaped and the fields have been repeatedly ploughed. The crop is an exhausting one, and the low lands which are annually flooded and fertilized by silt deposits from the rivers are therefore best suited for it. Pulses occupy 157 and mustard 146 square miles, and of other oilseeds *til* (*Sesamum indicum*) is cultivated extensively along the banks of the Lakhyā. A considerable amount of betel-leaf (*Piper Betle*) is grown, and yields a good return to the cultivators. Several varieties of plantains (*Musa sapientum*) are grown in homestead lands throughout the District, those produced in Munshiganj being celebrated for their delicate flavour; and tobacco in small quantities is cultivated in most homesteads. Sugar-cane is a favourite crop on the higher lands, and in recent years its cultivation has been greatly stimulated by the introduction of the Bihiyā cane-crushing mill.

Improvements in agricultural practice.

Cultivation is being gradually extended in the Madhupur Jungle since the opening of the railway and the construction of feeder-roads; elsewhere little land remains waste, and even old village pastures are being gradually absorbed. Owing to the immunity of the District from famine and the general wealth and prosperity of the people, there is little need for Government loans.

Cattle.

The District cattle are with few exceptions poor, and the best animals come from Sonpur and other up-country fairs. In the absence of pasture lands, cattle are generally turned out to graze in the fields after the crops have been cut. During the rains, when the crops are growing, there is often considerable difficulty in finding food for them; they are fed with straw when it is available, and large herds are driven into the Madhupur Jungle, where grazing grounds still exist.

Arts and manufactures.

The weaving of muslins, and also cotton-spinning and bleaching, have been the chief industrial occupations of Dacca from an early period of its history, while embroidery became an important industry after the Muhammadan conquest. The manufacture of the celebrated finer muslins for the Mughal courts exercised the ingenuity of the most skilful workmen, and plain muslins and various kinds of embroidered or mixed silk and cotton fabrics were largely exported to many countries in Europe and Western Asia. Dacca muslins were introduced into England about 1670, and the trade flourished till the end of the eighteenth century, as much as 30 or 40 lakhs being expended annually in the purchase of cloths for export to Europe. The industry could not, however, compete with English piece-goods made by machinery; and in 1807 the exports had fallen in value to 8½ lakhs, and by 1813 to 3½ lakhs, while since 1817, when the Commercial Residency was closed, the export to Europe may be said to have ceased.

The fine old pieces known as *ābrāwān* ('running water') or *shabnam* ('dew') fetched very high prices, and a few, made years ago, are still obtainable at a price of from Rs. 300 to Rs. 500 for a piece of 10 square yards. The demand for these costly luxuries disappeared with the fall of the native courts of Hindustān; but weaving is still an important industry, and the weavers of the city are among the best of their craft. English twist, which was first imported in 1821, soon ousted the native thread, and very fine muslin is now woven from it. *Kasidā* and *jhāppān* cloths are made in abundance, and are exported in large quantities to Afghānistān, Persia, Arabia, and Turkey, where they are worn by Musalmāns as turbans or made into

coats, waistcoats, and *chogas*. In and near Dacca city embroidery is worked on a large scale and commands high prices, a piece of embroidered figured muslin 5 yards long and 45 inches wide selling for as much as Rs. 500. The Dacca process of cotton-bleaching is a speciality in itself. The workers in gold, silver, and precious stones are more numerous than elsewhere in Bengal; they make very fine gold settings for precious stones and are famous for thin silver filigree, for which Dacca holds a reputation second only to that of Cuttack. Dacca shell-bangles are known throughout India, and more modern articles, such as sleeve-links, rings, and napkin-rings, are now being made. Boat-building is an ancient industry. Dacca is now the only District where budgerows and *kos* boats can be hired, and the latter find their way all over North and East Bengal. With the exception of the railway workshops, jute provides the only factory industry in the District, from the large hydraulic presses in Nārāyanganj down to the small hand-press in the country markets. The trade has sprung up during the last forty years; in 1903 there were 33 factories with 73 presses (mostly hydraulic), employing 6,000 hands, at which the jute is pressed into bales for export to Europe.

Both the export and import trade of the District pass through NĀRĀYANGANJ. The chief imports are cotton piece-goods, salt, kerosene oil, wines, shoes, and umbrellas from Calcutta, lime and coal from Assam, and timber from Assam and Chittagong. In addition to these commodities, rice is imported in large quantities, especially from Backergunge, and also spices, molasses, and betel-nuts. The jute exports amounted in 1901, a bumper year, to 375,000 tons; and it is estimated that two-fifths of this quantity were grown in Mymensingh, one-third in Tippera, one-fifth in Dacca, and the remainder in Sylhet, Farīdpur, and elsewhere. The other exports are comparatively unimportant; hides are sent to Calcutta, and pulses, betel-leaf, oilseeds, and pottery to Calcutta, Chittagong, Backergunge, and other neighbouring Districts. Trade is not confined to any particular community or caste; Europeans, Armenians, Muhammadans, and Hindus (especially Sāhās and Telis) are all engaged in it. Commerce.

In addition to Nārāyanganj and Dacca, there are many large marts on the waterways throughout the District, of which Jāgīr Hāt on the Dhaleswari (where nearly all the tobacco consumed in the District is brought in from Rangpur), Baidya Bāzār, Narsingdī, Munshir Hāt on the Meghnā, and Lohajang on the Padmā are among the most important. The Kārtik Bāruni

mela is a commercial gathering, held near Munshiganj in December and January. Religious festivals are also held at Nāngalband near Sonārgaon, at Dhāmrai, and at Lohajang.

Railways and roads.

A metre-gauge railway runs to Mymensingh from Nārāyanganj, which is connected with Calcutta by rail and steamer via Goalundo; and the construction of 66 miles of feeder-roads has done much to open up the Madhupur Jungle. The most important of these are an embanked road from Tungī to Kālīganj, on the Lakhyā, with a continuation to the Meghnā at Narsingdī, and roads connecting Srīpur and Rājendrapur with the Bānār river at Gosinga and Kāpāsia respectively, from Rājendrapur to Mirzāpur, and from Jaydebpur to Kadda. A road connects Dacca city with Baidya Bāzār, and has a branch to Nārāyanganj; the portion between Dacca and Nārāyanganj is metalled. The Baidya Bāzār road was intended to link Dacca with Comilla, but has not been much used as a trade route. The Dacca-Mymensingh road, unmetalled but bridged throughout, except at the Bānār and Tungī rivers, is connected with the railway by feeder-roads; and an unmetalled road from Dacca to Seālo (on the east bank of the Padmā opposite to Goalundo) connects the head-quarters of the Mānikganj subdivision with Dacca and Goalundo. Excluding 379 miles of village tracks, which are in general mere bridle-paths, and municipal roads, the District contains 321 miles of roads maintained by the District board. Owing to the excellent water communication, roads are but little needed; indeed, outside the towns carts are rarely used, and in the dry season goods are packed on bullocks and ponies.

Water communications.

Water communication is maintained by a network of channels between the big rivers. The Padmā is connected with the Dhaleswari by the Hilsāmāri, Ichāmatī, Tāltola, and Srīnagar *khāls*, though the two last named are navigable by large boats only in the rains; the Meghnā is similarly connected with the Old Brahmaputra by the Ariāl Khān and Mendikhāli. Numerous other boat routes tap marts in the interior, and, indeed, in the rainy season there are few parts of the District inaccessible to water traffic. The Jamunā, the Padmā, and the Meghnā are navigable by large river steamers at all seasons of the year; and there are daily services between Nārāyanganj and Cāchār, Sylhet, Goalundo, Chāndpur, Barisāl, and Khulnā, and also weekly cargo services between Dacca and Nārāyanganj and Calcutta via the Sundarbans. The bulk of the trade with Calcutta travels by this route, which is cheaper than the alternative route by steamer and rail via Goalundo. There is also

a service of steamers on the Dhaleswari. All these steamers, as well as those plying between Goalundo and Assam and Chāndpur, stop at several stations on the Dacca shore for cargo and passengers.

District subdivisions and staff.

For administrative purposes the District is divided into four subdivisions, with head-quarters at DACCA CITY, NĀRĀYANGANJ, DASARA (Mānikganj), and MUNSHIGANJ. The District staff subordinate to the Magistrate-Collector at head-quarters consists of a Joint-Magistrate, an Assistant Magistrate, and eleven Deputy-Magistrate-Collectors; the Nārāyanganj subdivision is in charge of a member of the Indian Civil Service, and the other two are under Deputy-Magistrate-Collectors.

Civil and criminal justice.

At Dacca city the District Judge has three Sub-Judges and four Munsifs subordinate to him for the disposal of civil work; one of the former is a Small Cause Court Judge and sits also at Munshiganj; four Munsifs sit at Nārāyanganj, four Munsifs and a registrar of the Small Cause Court at Munshiganj, and three Munsifs at Mānikganj. The criminal courts include those of the Sessions Judge, the Additional Sessions Judge (who acts also for the District of Mymensingh, where he is chiefly employed), the District Magistrate, and the Joint, Assistant, and Deputy-Magistrates mentioned above. Land disputes are the most common cause of the cases which come before the courts, but, though these frequently lead to petty affrays, they do not often result in serious crime.

Land revenue.

Little is known of the early land revenue history of the District. According to tradition, Sikandar Shāh (1358–89) made a survey of at least a part of it with a large standard of measurement still known as the Sikandari *gaj* (or yard measure); but the first settlement of which any record remains is that made by Rājā Todar Mal, Akbar's great finance minister, in 1558. The province of Dacca, corresponding roughly with the modern Dacca Division, was divided into two *sarkārs* named Sonārgaon and Bājūha. About a third of the area was allotted free of revenue in return for services rendered on the civil and military establishments, *nawāra* lands assigned for the upkeep of the fleet being the most common of this class. During the twenty years which followed the acquisition of the administration by the East India Company in 1765, the assessment of the Dacca province was reduced from 38 lakhs to 28 lakhs. In 1768 the *nawāra* lands were resumed by Mr. Sykes, and other tenures, such as *bāghmāra*, were abolished in 1771. The number of estates has largely increased by partition; of 10,517 estates now on the revenue roll only four

pay more than Rs. 10,000 as revenue. The current land revenue demand in 1903-4 was 5·21 lakhs, of which 4·25 lakhs was due from 9,843 permanently settled estates, Rs. 60,000 from 460 temporarily settled estates, and the remainder from 214 estates held direct by Government. The land revenue of this fertile District is extraordinarily low; it represents only 13·9 per cent. of the rental, and its incidence per acre of the cultivated area is only R. 0-6-11. The landlords' receipts, on the other hand, are not limited to the amount shown in their rent-rolls, as it is their universal practice to demand a high premium, which is really a capitalized portion of the rent, on the inception of a tenancy. On this account, rents appear low, as compared with those paid in Bihār and elsewhere. The rates per acre for arable and homestead lands are: in the head-quarters subdivision Rs. 3, and from Rs. 15 to Rs. 20, respectively; in Nārāyanganj Rs. 1-8 to Rs. 5, and Rs. 4 to Rs. 20; in Mānikganj Rs. 1-8 to Rs. 4, and Rs. 3 to Rs. 8; and in Munshiganj Rs. 2-4 and Rs. 15. The *bargā* system, whereby a tenant has his land cultivated by another in return for a share of the produce, is very common; but whereas the *bargādār* elsewhere acquires no tenant-right, in Dacca he holds under a tenant lease and has been held not to be liable to ejectment save for default of rent. The average area of a cultivator's holding in high lands is 3 acres, and in low and fertile lands one acre; but on the alluvial islands in the large rivers a single tenant may hold as much as 30 acres. A holding generally comprises both arable and homestead land, the latter including the plots round the house where tobacco and vegetables are grown, as well as garden or orchard land.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	4,80	4,89	5,11	5,21
Total revenue . .	13,19	16,49	19,40	20,84

Local and municipal government.

Outside the municipalities of DACCA and NĀRĀYANGANJ, local affairs are managed by the District board and four subdivisional local boards under its control. Owing to the low rent-rates, its income for so wealthy a District is very small, amounting in 1903-4 to Rs. 2,10,000, of which only Rs. 83,000 was derived from road cess. The expenditure was Rs. 1,77,000,

including Rs. 92,000 spent on public works and Rs. 58,000 on education.

The District contains 13 police stations or *thānas* and 5 outposts. The regular force under the District Superintendent consisted in 1903 of 5 inspectors, 52 sub-inspectors, 30 head constables, and 613 constables, including 13 water constables. The village police consisted of 356 *daffadārs* and 4,244 *chaukīdārs*. A company of military police, 100 strong, is stationed in Dacca city. The Central jail there has accommodation for 1,183 prisoners, and sub-jails at the three other subdivisional head-quarters for 75. Police and jails.

According to the Census of 1901, 6·5 per cent. of the population (12·1 males and 1 female) could read and write. The progress in recent years has been remarkable, the percentage of literate males having increased by 37 per cent. since 1891, and by nearly 90 per cent. since 1881. The percentage of literate females has nearly doubled in the last decade, and is five times what it was in 1881. The census figures, however, fail to give a fair idea of the standard of education of the District, owing to the large emigration of educated persons from the Bikrampur *pargana*. The total number of pupils under instruction increased from about 30,000 in 1881–2 to 78,834 in 1892–3; it fell to 76,415 in 1900–1, but rose again in 1903–4, when 80,062 boys and 8,295 girls were at school, being respectively 40·6 and 4·1 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 3,310, including 2 Arts colleges, 171 secondary schools, and 1,632 primary schools. An exceptionally large proportion of the pupils have passed beyond the primary stage. The total expenditure on education was 5·49 lakhs, of which Rs. 1,02,000 was met from Provincial funds, Rs. 57,000 from District funds, Rs. 4,000 from municipal funds, and 3·12 lakhs from fees. The principal institutions are situated in DACCA CITY, including the Dacca College, the Jagannāth College, the medical school, the Madrasa, the survey school, and the Eden girls' school; there is also a high school at each of the subdivisional head-quarters. The progress made by the better classes is indicated by the fact that there are no less than 25 printing presses in the District; at 6 of these newspapers are published, 3 of them in English. Education.

In 1903 the District contained 16 hospitals and dispensaries, of which 7 had accommodation for 233 in-patients. The cases of 113,000 out-patients and 3,922 in-patients were treated Medical.

during the year, and 8,880 operations were performed. The expenditure was Rs. 73,000, of which Rs. 1,800 was met by Government contributions, Rs. 5,000 from Local and Rs. 15,000 from municipal funds, and Rs. 8,000 from subscriptions; Rs. 5,000 was spent during the year on buildings and repairs. The chief institution is the Mitford Hospital in DACCA CITY, where there is also a lunatic asylum.

Vaccination. Although vaccination is compulsory only within the Dacca and Nārāyanganj municipalities, it has made good progress throughout the District, and 95,000 persons, or 37·3 per 1,000 of the population, were successfully vaccinated in 1903-4.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. v (1875); Dr. D. G. Taylor, *Topography and Statistics of Dacca* (1840); Hem Chandra Kar, *Jute Cultivation in Dacca* (Calcutta, 1879); A. C. Sen, *Report on the System of Agriculture in the Dacca District* (Calcutta, 1889).]

Dacca Subdivision.—Head-quarters subdivision of Dacca District, Eastern Bengal and Assam, lying between 23° 30′ and 24° 20′ N. and 90° and 90° 43′ E., with an area of 1,266 square miles. The south of the subdivision consists of a level alluvial plain, but to the north the country is broken and rugged, containing large tracts of waste land covered with jungle. The population in 1901 was 881,517, compared with 790,936 in 1891. It contains one town, DACCA CITY (population, 90,542), the head-quarters; and 2,647 villages. The subdivision comprises a large portion of the sparsely inhabited MADHUPUR JUNGLE, and is much less thickly populated than the rest of the District, the density, even when the city is included, being only 696 persons per square mile.

Nārāyanganj Subdivision.—North-eastern subdivision of Dacca District, Eastern Bengal and Assam, lying between 23° 34′ and 24° 15′ N. and 90° 27′ and 90° 59′ E., with an area of 641 square miles. The greater part of the subdivision consists of a level plain intersected by numerous watercourses, but to the extreme west this plain merges in a small tract of broken jungle-covered country. The population in 1901 was 660,712, compared with 574,516 in 1891, the density being 1,031 persons per square mile. The subdivision contains one town, NĀRĀYANGANJ (population, 24,472), the head-quarters; and 2,177 villages. The principal seats of commerce are Nārāyanganj town on the Lakhyā, and Baidya Bāzār and Narsingdi on the Meghnā. The chief place of historical importance is SONĀRGAON. A large bathing festival is held annually at Nāngalband.

Munshiganj Subdivision.—South-eastern subdivision of Dacca District, Eastern Bengal and Assam, lying between 23° 14′ and 23° 41′ N. and 90° 10′ and 90° 42′ E., with an area of 386 square miles. The subdivision is a fertile alluvial tract, bounded on three sides by large rivers, the Padmā on the south, the Meghnā on the east, and the Dhaleswari on the north. The population in 1901 was 638,351, compared with 581,051 in 1891. It contains 978 villages, but no town; the head-quarters are at MUNSHIGANJ. This subdivision, which contains the greater part of the old BIKRAMPUR *pargana*, is one of the most thickly populated rural tracts in India, having a density of 1,654 persons per square mile. The principal centres of trade are Munshiganj, near which a large annual fair, known as the Kārtik Bāruni *mela*, is held for a month in December and January, Bhāgyakūl, Lohajang, and Mirkādim.

Mānikganj Subdivision.—Western subdivision of Dacca District, Eastern Bengal and Assam, lying between 23° 37′ and 24° 2′ N. and 89° 45′ and 90° 15′ E., with an area of 489 square miles. The subdivision is a level alluvial plain, bounded on the west and south by the Padmā. The population in 1901 was 468,942, compared with 448,927 in 1891, the density being 959 persons per square mile. It contains 1,461 villages, but no town. Since 1861, when the town of Mānikganj was swept away by a flood, the head-quarters have been at DASARA, a village 2 miles to the south of the old site. There is a large mart at Jāgīr Hāt, 2 miles from the subdivisional head-quarters.

Bikrampur.—*Pargana* or fiscal division in the Munshiganj subdivision of Dacca District, Eastern Bengal and Assam, famous as the seat of government under the Sen kings of Bengal, and especially of Ballāl Sen, who effected so many changes in the caste system of Bengal. It takes its name from Vikramāditya, who is reputed to have made his capital there, the site of which can still be traced in the modern village of RĀMPĀL. The *pargana* extends over the two police divisions of Munshiganj and Srīnagar. It contains several *tols* where logic, rhetoric, grammar, and astronomy are taught, and in Bengal ranks second only to Nabadwīp as a seat of Sanskrit learning. It supplies nearly a third of the subordinate native officials in the Government offices of Bengal.

Dacca City.—Head-quarters of the Division and District of the same name, Eastern Bengal and Assam, and also capital of the new Province, situated in 23° 43′ N. and 90° 24′ E., on the north bank of the Burhī Gangā river (at one time a main

channel of the Padmā), 8 miles above its junction with the Dhaleswari; 254 miles distant from Calcutta by rail and river via Nārāyanganj and Goalundo. Its name is commonly supposed to be derived from the *dhāk*-tree (*Butea frondosa*), though some assign it to the goddess Dhākeswarī, who has a shrine here. The city is the largest in Eastern Bengal, and had in 1901 a population of 90,542, of whom 53·5 per cent. were Hindus and 45·7 per cent. Musalmāns; among the remainder were 484 Christians and 194 Brahmos. Dacca was a flourishing city long before the days of British rule, and was subsequently the emporium of the well-known muslins which were in great demand in Europe and especially in France. In 1801 the city was estimated to have a population of 200,000, but its prosperity was seriously affected by the French Wars, and in 1830 the population had fallen to 67,000. In the last half-century there has been a revival of the weaving industry, especially of the manufacture of *jhāppāns* and *kasidās*, which are largely exported to Turkey and other Muhammadan countries; and this, with the growth of the jute and hide trades, has caused a return of prosperity. There has been a steady increase of the population in recent years, the net gain between 1872 and 1901 amounting to 30 per cent.

The city is intersected by a branch of the Dolai creek, and extends along the bank of the Burhī Gangā for a distance of 6 miles, and northwards for a mile and a quarter. The two principal streets cross each other at right angles, one running parallel to the river for upwards of 4 miles from the Lālbāgh palace to the Dolai creek, the other, a fine broad street bordered by regularly built houses, leading north from the river to the old military cantonments. The *chauk* or market-place, a large square, lies nearly in the middle of the city, but most of the buildings are poor and are intersected by a network of narrow, crooked lanes. The houses of the European residents extend along the river front for half a mile in the east of the city.

History. The Muhammadan capital of Eastern Bengal was originally at SONĀRGAON; but about 1608 the governor, Islām Khān, transferred the capital of the whole province from Rājmahāl to Dacca, which was a convenient base for his operations against the Ahoms of Assam, and also against the Portuguese pirates who, in alliance with the Maghs or Arakanese, were then ravaging the waterways of the delta. The city quickly rose to great prosperity, and the English, French, Dutch, and Portuguese all had factories there. In 1704, however, the

Nawāb Murshid Kulī Khān moved his residence to Murshidābād; and though Dacca long retained a titular Nawāb, its glory departed with the removal of the court. It now preserves few traces of its former magnificence as the provincial capital. The old fort, erected in the reign of the emperor Jahāngīr, has entirely disappeared; and the only public buildings of this period still remaining are the two Katrās, built by prince Shujā in 1645, the palace of the Lālbāgh which was never completed, and several old mosques. (The term *katrā* is applied to the market town belonging to a fort, and the buildings first mentioned apparently derived the name from the rows of shops attached to them.) These buildings are now mere ruins, and their decorations have been wantonly destroyed; the old European factories have also been swept away.

The chief event of importance in the recent history of Dacca is connected with the Mutiny of 1857. Two companies of sepoys were then stationed in the fort. On the first alarm of the outbreak at Meerut 100 men of the Indian Navy were dispatched from Calcutta for the protection of the city. With these sailors and about 60 civilian volunteers, it was resolved to disarm the sepoys, who had become mutinous. They offered a stout resistance, and were only dispersed after a sharp struggle, in which 41 rebels were killed on the field, and a number of others were drowned in the river or shot down in their flight. On the formation of the new Province of Eastern Bengal and Assam in 1905, Dacca was selected as the headquarters of the Local Government.

Tornadoes.

Two noteworthy tornadoes have occurred in recent years in the vicinity. In the first, in April, 1888, no less than 3,527 houses were completely demolished; the Nawāb's palace and 148 brick houses were partially wrecked; 121 boats were destroyed, including the police steam launch, which was carried away from its moorings and sunk; and 130 persons were killed and 1,500 injured. The tornado passed on to the Munshiganj subdivision, where it destroyed five or six villages and caused about 70 deaths. The second tornado, in April, 1902, was first felt on the south side. Crossing the river, it described a serpentine course in an easterly direction for 16 miles, leaving behind it a clear-cut avenue, varying from 100 yards to half a mile in breadth, of complete devastation of trees and houses; 88 persons were killed and 238 injured.

Municipality.

Dacca was constituted a municipality in 1864. The income during the decade ending 1901–2 averaged Rs. 1,75,000, and

the expenditure Rs. 1,53,000. In 1903-4 the income was Rs. 2,15,000, including Rs. 92,000 from a tax on houses and lands, Rs. 42,000 from a conservancy rate, Rs. 6,000 from a tax on vehicles, Rs. 14,000 from tolls, and Rs. 25,000 as revenue from municipal property. The incidence of taxation was Rs. 1-11-5 per head of the population. In the same year the expenditure amounted to Rs. 2,04,000, the chief items being Rs. 9,000 spent on lighting, Rs. 17,000 on water-supply, Rs. 4,000 on drainage, Rs. 61,000 on conservancy, Rs. 18,000 on medical relief, Rs. 25,000 on roads, and Rs. 3,000 on education. The water-works scheme, which owes its inception to the liberality of the late Nawāb Sir Abdul Gani, is one of the most extensive and complete in Bengal: the water is pumped up from the Burhī Gangā river and filtered, after which it is distributed throughout the city. The original project was completed in 1877 at a cost of Rs. 1,95,000, the Nawāb contributing a lakh and the balance being defrayed by a Government grant. The works were extended in 1891 at a cost of Rs. 1,25,000, obtained by the municipality as a loan from Government. The average annual cost of maintenance during the decade ending 1901 was Rs. 16,000, and the capital expenditure up to 1901 was 3·67 lakhs; from 70,000 to 80,000 persons are daily supplied with filtered water. The city also possesses an electric light installation, presented by the late Nawāb Sir Ahsān-ullah, who gave 2 lakhs for the original construction and 2 lakhs more for its maintenance. The two main streets are now lighted by incandescent lamps, and electric light is supplied to several shops and private houses, which are also provided with electric fans.

Commerce. Thanks to the fertility of the surrounding country and its proximity to several great rivers, Dacca is a progressive place, and, including the commerce of its river ports at NĀRĀYANGANJ and Madanganj, it is the most important inland mart of Eastern Bengal. Jute, oilseeds, and hides are collected for export, piece-goods, salt, and kerosene oil are imported, and there is also a large trade in rice and other commodities. The other important industries, besides the jute trade, are weaving, gold- and silver-work, shell-carving, and boat-building; these are described in the article on DACCA DISTRICT.

Education. The city is well provided with educational institutions. Dacca College, originally established by Government as an English seminary in 1835, was raised to the status of a college in 1841, the present building having been completed in 1846. The college is affiliated to the Calcutta University, and is,

after the Presidency College, the largest first-grade college in Bengal, having 304 students on its rolls in 1904, and a staff of a European principal and twelve professors and lecturers; in that year the expenditure amounted to Rs. 52,000. Attached to it is a collegiate school, with 449 scholars on its rolls. Jagannāth College, which imparts education up to the First Arts standard of the Calcutta University, is a private institution founded in 1883 by a Hindu *zamīndār* in memory of his father. It had 359 students on its rolls in 1904, and is self-supporting. The medical school was established in 1875 and is subsidized by Government. The present building was constructed in 1889 at a cost of Rs. 64,000, raised by public subscription, and is provided with lecture theatres, dissection rooms for male and female students, and a museum. In 1904 the students numbered 191, including 5 women; the Civil Surgeon is the Superintendent, and he is assisted by 4 teachers (assistant surgeons), 4 assistant teachers (civil hospital assistants), and a taxidermist. The course extends to four years, and practical instruction is given in the wards of the Mitford Hospital; 24 scholarships and as many free studentships are awarded annually to successful students. The Madrasa, established in 1874, comprises two departments—Arabic and Anglo-Persian—the former teaching Arabic up to the highest standard and also Persian and Urdū. In 1904 there were 371 students in the Arabic and 242 in the Anglo-Persian department. Three-fifths of the expenditure is met from the Mohsin Endowment Fund, and the balance from fees; there is a boarding-house with accommodation for 38 boarders. A survey school was established in 1886, and is equipped with a workshop where carpentry and blacksmith's work are taught to the students, who in 1901 numbered 104. Finally, the Eden girls' school, established in 1878, has 117 pupils on its rolls.

Public works.

Dacca is the head-quarters of an Inspector of Works and an Executive Engineer. An Engineering college is under construction. A Roman Catholic church built in 1815 has a convent and orphanage. A Protestant church (St. Thomas's) was erected in 1819 and consecrated in 1827.

Volunteers.

The Eastern Bengal Volunteer Rifles have their head-quarters at Dacca, with detachments at Chittagong, Comilla, Fenny, Barisāl, Mymensingh, and Nārāyanganj. The corps comprises six companies, including one mounted, one cadet, and one reserve company, and had in 1903–4 an enrolled strength of 325.

Jail.

The Central jail is the largest in Eastern Bengal, having accommodation for 1,183 prisoners. The convicts are em-

ployed on cloth-weaving, tailoring, oil-manufacture, bread-making, carpet-weaving, bamboo- and cane-work, and carpentry. The cloth is made into uniforms for the village watch and prison clothing, and the other products are sold locally or in Calcutta.

Medical. The Mitford Hospital, named after its founder, a former Collector and Judge of the District, was opened in 1858, and is partly supported by funds bequeathed by him. In 1903 it had accommodation for 170 in-patients (133 males and 37 females); the total number of cases treated was 31,110, of whom 3,384 were in-patients, and 4,181 operations were performed, the total expenditure being Rs. 54,000, of which Rs. 33,000 was spent on buildings and repairs. There is also a Lady Dufferin Zanāna Hospital with four beds, where 2,704 persons were treated during the year. The lunatic asylum was founded in 1815, and has accommodation for 217 males and 45 females; it receives patients from the Dacca and Chittagong Divisions and from the Districts of Sylhet and Cāchār. The average number of lunatics annually admitted is 52, and the average daily strength is 232; nearly half the inmates are criminals. The annual cost is about Rs. 26,000.

Dasara.—Head-quarters of the Mānikganj subdivision of Dacca District, Eastern Bengal and Assam, situated in 23° 53′ N. and 90° 2′ E., on the west bank of the Dhaleswari river. Population (1901), 1,548. It is a large mart, the bazar extending over 2 square miles. It possesses the usual public offices; the sub-jail has accommodation for 22 prisoners.

Durduria.—Site of a ruined fort in the head-quarters subdivision of Dacca District, Eastern Bengal and Assam, situated on the banks of the Bānār river, about 8 miles above its junction with the Lakhyā. The popular name of the fort, which is said to have been built by some Bhuiyā or local chief, is Rānībāri ('queen's palace'). The fort is crescent-shaped, and there are ruins of two buildings, one of which was probably a tower. The enclosing wall is more than two miles in length, and in 1839 stood from 12 to 14 feet high. Opposite to Durduria are the foundations of a tower and two magnificent tanks.

Lohajang.—Market in the Munshiganj subdivision of Dacca District, Eastern Bengal and Assam, situated in 23° 25′ N. and 90° 19′ E., on the north bank of the Padmā, and, after Goalundo, the principal steamer station on that river. Population (1901), 464. The Jhulanjātra fair, held here in July or August, is attended by about 800 persons daily.

Munshiganj Town.—Head-quarters of the subdivision of

the same name in Dacca District, Eastern Bengal and Assam, situated in 23° 33′ N. and 90° 32′ E., on the banks of the Meghnā. Population (1901), 964. The station possesses the usual public offices; the sub-jail has accommodation for 17 prisoners. Munshiganj has been identified as the site of the ancient Idrakpur. The Kārtik Bāruni *mela* is a large commercial gathering held on the banks of the Dhaleswari in December and January. It used to be the great centre from which traders in neighbouring Districts took their supplies, and is still largely attended; but its importance has declined now that the steamers have brought almost every village on the large rivers into touch with Calcutta.

Nārāyanganj Town.—Head-quarters of the subdivision of the same name in Dacca District, Eastern Bengal and Assam, situated in 23° 37′ N. and 90° 30′ E., on the west bank of the Lakhyā at its confluence with the Dhaleswari just before that river joins the Meghnā. The population in 1901 was 24,472, of whom 50·8 per cent. were Hindus and 48·4 Muhammadans; there were only 169 Christians. Nārāyanganj is distant from Dacca city 9 miles by land and about 20 by water, and is in reality the port of that city; it extends for 3 miles along the bank of the Lakhyā, and, with its suburb Madanganj on the opposite bank, is the most progressive town in Eastern Bengal. The population has nearly doubled since 1881; and had the Census been taken during the rains in the height of the jute season, the number of inhabitants would probably have exceeded 35,000. In the neighbourhood are several forts built by Mīr Jumla to repel the invasions of the Maghs or Arakanese, and a mosque known as the Kadam Rāsul which is held in great reverence by pious Musalmāns.

Nārāyanganj, including Madanganj, was constituted a municipality in 1876. The income during the decade ending 1901–2 averaged Rs. 55,000 and the expenditure Rs. 52,000. In 1903–4 the income was Rs. 76,000, including Rs. 38,000 derived from a tax on houses and lands, Rs. 22,000 from a conservancy rate, and Rs. 6,000 from tolls. The incidence of taxation was Rs. 2–11–10 per head of the population. In the same year the expenditure was Rs. 69,000, including Rs. 3,000 spent on lighting, Rs. 3,000 on drainage, Rs. 25,000 on conservancy, Rs. 3,000 on medical relief, Rs. 16,000 on roads, and Rs. 1,100 on education. Nārāyanganj has the appearance of a Western rather than of an Eastern town, and has not unjustly been called the model municipality of Bengal. The municipality owns a large market, and a scheme

has been formulated for supplying two of the three wards with unfiltered water at an estimated cost of Rs. 1,79,000.

Nārāyanganj was already a busy market a century ago. Since then its commerce has increased enormously, owing to the growth of the jute trade and the development of rail and steamer communications; and it is now the busiest trade mart in Eastern Bengal. It taps the huge jute areas of Mymensingh, North Tippera, and Dacca, and focuses the imports from Calcutta for their dense populations. Nārāyanganj owes its prosperity to its ready access to the seaports. It is connected with Calcutta by steamer and rail via Goalundo, and with Chittagong by steamer and rail via Chāndpur, or by brigs, which, however, are now being ousted by the railway. On account of its trade with Chittagong, Nārāyanganj has been declared a port under the Sea Customs Act. The expansion of the jute trade is of comparatively recent date; in 1872 there were only 6 screw-houses in Nārāyanganj, while in 1901 there were 53 factories with 73 presses, mostly hydraulic, employing 6,000 hands. The annual export has increased from 40,000 to 320,000 tons during the last thirty years. The jute is pressed into bales for export to Europe, two-thirds of the output being shipped from Calcutta, and one-third from Chittagong.

Nārāyanganj contains the usual public offices, a sub-jail with accommodation for 36 prisoners, civil courts, a branch of the Bank of Bengal, two higher class English schools, and a hospital with 30 beds.

Rāmpāl.—Village in the Munshiganj subdivision of Dacca District, Eastern Bengal and Assam, situated in 23° 33′ N. and 90° 30′ E. Population (1901), 519. The site of the old capital of Bikrampur is pointed out near the large tank called Rāmpāl-dīghi, which is three-quarters of a mile long by a quarter of a mile broad; to the north of this tank is the Ballāl-bāri, or palace of Ballāl Sen, the remains of which consist of a quadrangular mound of earth 3,000 square feet in area surrounded by a moat 200 feet wide. Foundations and remains of other buildings are found for miles around, and early in the nineteenth century a cultivator ploughed up in the neighbourhood a diamond worth Rs. 70,000. Inside the Ballāl-bāri is a deep excavation called Agnikunda, where tradition says the last prince of Bikrampur and his family burned themselves at the approach of the Musalmāns. Close to the Ballāl-bāri stands a much venerated tomb of one Bābā Adam or Adam Shahīd.

[Cunningham, *Archaeological Survey of India Reports*, vol. xv, pp. 132–5.]

Sābhār.—Village and ruins in the head-quarters subdivision of Dacca District, Eastern Bengal and Assam, situated in 23° 51′ N. and 90° 15′ E., on the east bank of the Bansi river. Population (1901), 1,904. It was formerly the capital of a Bhuiyā or chief named Haris Chandra, but the only vestiges of it are ruins of buildings and old tanks and the remains of what must have been a tower. Sābhār is now an important mart.

Sonārgaon.—Ancient Muhammadan capital of Eastern Bengal, situated in 23° 40′ N. and 90° 36′ E., in the Nārāyanganj subdivision of Dacca District, Eastern Bengal and Assam, near the banks of the Meghnā, 15 miles east of Dacca city. Sonārgaon was the residence of the Muhammadan governors of Eastern Bengal from 1296 to 1608, when the capital of the whole province was transferred to Dacca. The only remaining traces of its former grandeur are some ruins in and near the insignificant village of Pānām, about 6 miles east of Nārāyanganj. Hard by is Mogrāpāra, where there was a mint, and Amīnpur, the *croribāri* or residence of the Nawāb's banker, whose descendants are still living. Hāmchādi is said to have been the residence of the commander-in-chief; and a neighbouring village, Rānījhī, is associated with the name of Ballāl Sen's mother. While Sonārgaon was the seat of government, it was a place of considerable commercial importance and was famous for its cloths and muslins; it was the eastern terminus of the grand trunk road made by Sher Shāh.

[Cunningham, *Archaeological Survey of India Reports*, vol. xv, pp. 135-45.]

Mymensingh District (*Maimansingh*).—District in the north of the Dacca Division, Eastern Bengal and Assam, lying between 23° 57′ and 25° 26′ N. and 89° 36′ and 91° 16′ E., with an area of 6,332 square miles. It derives its name from the old *pargana* or fiscal division of Maimansingh. On the north and east the District marches with Assam, being bounded on the north by the Gāro Hills, and on the east by Sylhet; on the south-east it adjoins Tippera, and on the south Dacca; on the west it is separated by the Jamunā (or Brahmaputra) from the Districts of Pābna, Bogra, and Rangpur.

Boundaries, configuration, and river system.

Until the beginning of the nineteenth century the main stream of the Brahmaputra flowed through the middle of the District from north to south; and although it now passes along the western boundary and the Old Brahmaputra has shrunk to a mere fraction of its former volume, its channel cuts the District into two great natural divisions with a marked difference between the country on either bank. The people to the east

of it resemble in their dialect, social customs, and observances those of the adjoining District of Sylhet, while those to the west are like the inhabitants of Pābna, Dacca, and Farīdpur. To the east the country is intersected by marshes or *haors*, where large herds of buffaloes are grazed in the cold season, and the whole country is submerged during the rains, except the crowded village sites which are artificially raised above the ordinary flood-level. The general elevation of the country west of the Old Brahmaputra is higher, and it contains a great part of the formation known as the MADHUPUR JUNGLE, which stretches northwards from the boundary of Dacca District almost as far as the town of Mymensingh. This tract, which may be said to constitute a third natural division of the District, has an average height of about 40 feet above the level of the plains, and nowhere exceeds 100 feet; it is about 45 miles in length and from 6 to 16 miles in breadth, with a total area of about 420 square miles. The formation, which consists of a stiff layer of red ferruginous clay resembling that of the Bārind in North Bengal, is of considerable depth and capable of offering a tenacious resistance to the erosive action of rivers; and when the Old Brahmaputra, after having raised its bed and lost its velocity, was no longer able to hold its own against the Meghnā, this bank of clay forced it to swing westwards and to mingle its waters with those of the Jamunā. The Susang hills rise on the northern border; but elsewhere the District is level and open, consisting of well-cultivated fields, dotted with villages, and intersected by numerous small rivers and channels.

The Madhupur Jungle divides the District into two portions. The western and smaller portion is watered and drained by the river system connected with the JAMUNĀ, the eastern by the Old BRAHMAPUTRA and its branches together with other numerous streams, which, issuing from the Gāro Hills on the north, flow eastwards and southwards into the Surmā and Meghnā. The numerous branches and tributaries of the Jamunā afford exceptional facilities for river trade; of the former, the Dhaleswari, and of the latter, the Jhinai, an effluent of the Old Brahmaputra, are the most important. The SURMĀ (also known as the Dhaleswari or Bheramonā) comes down from the Surmā Valley in Assam and forms generally the eastern boundary, taking the name of the MEGHNĀ in the extreme south-east of the District. Two branches of the Meghnā, the Dhanu and the Ghorā-utra, are navigable throughout the year. The Kāngsa, a narrow stream, but deep and navigable

throughout the year by boats of considerable burden, forms the boundary for a short distance between Mymensingh and Sylhet. There are several marshes in the east and south-east of great size and depth, which swarm with fish.

The greater part of the District is covered with recent alluvium, which consists of coarse gravels near the hills, sandy clay and sand along the course of the rivers, and fine silt consolidating into clay in the flatter parts of the river plain; beds of impure peat also commonly occur. The red ferruginous clay of the Madhupur Jungle belongs to an older alluvial formation. Geology.

The District contains no Government forests, but the Madhupur Jungle is covered with a dense growth of tall trees overrun with creepers, with numerous large grasses at their base. The forest is similar in composition to that under the Himālayan range, containing a mixture of *Leguminosae*, *Combretaceae*, *Anacardiaceae*, *Urticaceae*, *Meliaceae*, and *Sapindaceae*. In the north the Susang hills are covered with a thick thorny jungle. The surface of the marshes in the east and south-east of the District either shows huge stretches of inundated rice, or is covered by matted floating islets of sedges and grasses and water-lilies, the most striking being the *makana* (*Euryale ferox*); while the river banks and the artificial mounds on which habitations are situated are, where not occupied by gardens, densely covered with a scrubby jungle of semi-spontaneous species, from which rise bamboos with a few taller trees, among which the commonest is the *jiyal* (*Odina Wodier*) and the most conspicuous the red cotton-tree (*Bombax malabaricum*). Botany.

Leopards are found throughout the District, and tigers, buffaloes, and wild hog are numerous in the Madhupur Jungle and the submontane tracts in the north. Deer are abundant in the same localities, the *sāmbar* (*Cervus unicolor*) and the hog deer being the most common; the barking-deer is also found, and the *barasinghā* (*Cervus duvauceli*) is also met with in the grassy plains at the foot of the hills. Elephants abound in the Gāro and Susang hills, and occasionally commit great depredations among the crops in the vicinity. The rivers and marshes swarm with fish, which are dried at Kishorganj and exported to Assam, Chittagong, and Rangpur. Fauna.

The temperature changes but little between April and October; the average maximum falls from 91° in April to 86° in October, while the highest average minimum is 78° in July, August, and September, and the mean is almost constant at Temperature and rainfall.

82°. In January the average minimum falls to 53° and the mean temperature to 64°. The monsoon rainfall begins in May and, owing to the ascensional motion of the monsoon current caused by the Gāro Hills, is heavier throughout the season than in any other inland tract of Eastern Bengal. The fall is 11 inches in May and 17·9 in June, after which it slowly diminishes to 12·3 in September; the average fall for the year is 86 inches. The heaviest fall recorded was 134 inches in 1865, and the lightest 57 inches in 1883. Though floods may occur in any monsoon month, very heavy precipitation occurs either early or late in the season, being due to depressions from the Bay which break up on reaching the Assam Hills.

Earthquakes. The earthquake of 1885 caused considerable damage, especially along the north of the District, which lay on the arc of greatest intensity. The great earthquake of 1897 shook the District even more violently, especially in the north, below the Gāro Hills, in the Jamālpur and Netrakonā subdivisions. Throughout the District brick buildings were destroyed or seriously damaged; houses were half buried; sand was upheaved through fissures in the soil, and spread over the surface, damaging the rice crop; wells ran dry, and tanks had their bottoms raised by the upheaval of the soil. The mischief, however, did not end here, for the beds of a large number of rivers formerly navigable were raised, rendering boat traffic impracticable except during the rains, roads and bridges were injured, and considerable damage was also done to the permanent way and bridges on the Dacca-Mymensingh Railway, where traffic was suspended for a fortnight. The cost of repairs in Mymensingh town to Government buildings alone was estimated at a lakh; the private losses in the whole District were estimated at 50 lakhs, while 50 lives were lost.

History. In ancient times the District formed part of the old kingdom of Prāgjyotisha, or Kāmarūpa as it was subsequently called, whose ruler Bhagadatta was one of the great chiefs who is said to have fought at the battle of Kurukshetra. In the Mahābhārata he is styled the king of the Kirātas, and his kingdom is said to have extended to the sea. His capital was at Gauhāti in Assam; but the site of a palace believed to have been erected by him is still pointed out in the Madhupur Jungle at a place known as Bāra Tīrtha ('twelve shrines'), where a fair is held annually in April. The kingdom was ruled by a succession of princes of Mongoloid stock, and was still flourishing when visited by Hiuen Tsiang in the seventh century. At that time its southern boundary seems to have corresponded with the

present Dhaleswarī in Dacca District, while it extended westwards as far as the Karatoyā river. The portion of the District west of the Old Brahmaputra was included in Ballāl Sen's dominions, but not so the tract east of that river; the system of Kulinism instituted by that monarch is still in full force in the former, while it is almost unknown in the latter, tract.

The Muhammadans first entered Bengal in 1199, but Eastern Bengal was not subdued till later. In 1351 the whole province was united by Shams-ud-dīn Ilyās Shāh; and Sonārgaon, near Dacca, became the residence of the governors of Eastern Bengal. Eastern Bengal subsequently became the seat of dissensions and rebellions, but it was again subdued by Mahmūd Shāh in 1445. His family reigned till 1487, and during their time this tract formed the province of Muazzamābād, which apparently extended to Laur in Sylhet at the foot of the Gāro Hills. Local tradition ascribes the subjugation of eastern Mymensingh to Sultān Husain Shāh and his son Nusrat Shāh. The former established a fort at Ekdāla, not far from the southern boundary of the District, whence he sent an expedition against the Ahoms. *Pargana* Husainshāhi is said to have been named after him, and Nusratshāhi, including Susang and twenty-one other *parganas*, after his son. The conquest does not, however, seem to have been complete, and in the latter half of the sixteenth century we find that Eastern Bengal was again split up into a number of petty states ruled by independent chiefs locally known as Bhuiyās. One of the best known of these, Isa Khān, the founder of the great Mymensingh family known as the Dīwān Sāhibs of Haibatnagar and Jangalbāri, had his head-quarters at Sonārgaon, and is said to have ruled over a large kingdom, including the greater part of Mymensingh, till his death in 1598; he is mentioned by Ralph Fitch, who visited Sonārgaon in 1586, as being the 'chief of all the other kings.' Another important Bhuiyā of this period, ruling over Bhāwāl in Dacca and the adjoining *pargana* of Ran Bhāwāl in Mymensingh, was the head of the Ghāzī family founded by Palwān Shāh, a military adventurer of the early fourteenth century.

At the time of the settlement of 1582 by Todar Mal, Mymensingh formed part of the great *sarkār* Bājūha, which stretched eastward from *sarkār* Bārbakābād across the Brahmaputra to Sylhet, and southward as far as the city of Dacca. When the District passed into the hands of the Company, on the grant of the Dīwāni in 1765, it formed part of the *niābat* which extended from the Gāro Hills on the north to

the Sundarbans on the south, and from the Tippera Hills on the east to Jessore on the west, so called because it was governed by a *naib* or deputy of the Nāzim. The District of Mymensingh was formed about 1787, and placed under one Collector with the revenue charge of Bhuluā, which comprised the Districts of Tippera and Noākhāli. This union lasted only till 1790, when Bhuluā was again separated; and in 1791 the head-quarters of the Collector, which had apparently been at Dacca, were transferred to their present site in Mymensingh. Some changes of jurisdiction have since taken place, of which the most important were in 1866, when the Sirājganj *thāna* was transferred to Pābna, and the Dīwānganj and Atiā *thānas* were added from Bogra and Dacca respectively.

Archaeology. Archaeological remains are meagre. The most important is an old mud fort covering 2 square miles at Garh Jaripā near Sherpur, probably built more than 500 years ago as an outpost to check the incursions of the hill tribes.

The people. The population recorded at the Census of 1872 was 2,351,695, rising to 3,055,237 in 1881, 3,472,186 in 1891, and 3,915,068 in 1901. The climate is generally salubrious, but the Durgāpur *thāna* at the foot of the Gāro Hills has a reputation for unhealthiness. The majority of the deaths are ascribed to fever. Cholera and small-pox often occur in an epidemic form. Leprosy is more common than elsewhere in Eastern Bengal.

The chief statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Mymensingh	1,849	2	2,367	977,476	529	+ 14.6	34,207
Netrakonā	1,148	1	1,965	574,771	501	+ 7.1	18,797
Jamālpur	1,289	2	1,747	673,398	522	+ 16.1	20,180
Tangail	1,061	1	2,030	970,239	914	+ 12.9	45,253
Kishorganj	985	2	1,661	719,184	730	+ 11.8	27,949
District total	6,332	8	9,770	3,915,068	618	+ 12.8	146,386

There is little distinction between the rural and urban population, as even in the towns the houses are scattered, and a large proportion of the inhabitants are engaged in purely agricultural pursuits. Outside the so-called towns there is no village with more than 5,000 inhabitants, and nearly half the population live in villages with less than 500. Of the towns,

the largest are JAMĀLPUR, TANGAIL, KISHORGANJ, and NASĪRĀBĀD, the head-quarters. Owing to the sparse population in the Madhupur Jungle and in the hilly north-eastern tract, the District, as a whole, is less thickly inhabited than other parts of Eastern Bengal. In some parts, however, the population is very dense, and two *thānas* of the Tangail subdivision and one in the centre of the District support more than 1,000 persons per square mile. During the ten years ending 1901, every *thāna* in the District with one exception showed an increase of more than 8 per cent., the only tract which did not share in the general advance being the swampy north-eastern *tarai* in the Durgāpur *thāna*, which supports only 299 persons per square mile.

Mymensingh suffers a slight loss by the ordinary movements of population, chiefly in the direction of Rangpur, whither some of the riparian inhabitants have gone to cultivate the accretions formed on the right bank of the Jamunā. On the other hand it gains considerably from Tippera, whose women are in request as wives and maidservants. Large numbers of labourers flock in from Sāran and the United Provinces during the winter, and are employed on earthwork, *pālki*-bearing, and domestic service. The vernacular is a dialect of Bengali known as the Eastern or Musalmānī dialect; some people of Gāro origin talk Haijong, a corrupt *patois* of Bengali. In 1901 Muhammadans numbered 2,795,548, Hindus 1,088,857, and Animists 28,958; the first increased by more than 16 per cent. during the preceding decade, and now form 71·4 per cent. of the population.

Castes and occupations.

The majority of the Muhammadans are probably the descendants of converts from the aboriginal races whose representatives are still numerous in the District: namely, the Namasūdras (156,000) and the Rājbansis or Koch (52,000). Of the common Hindu castes of Eastern Bengal, the Kaibarttas (131,000) are the most numerous. Gāros and other cognate aboriginal races—such as Haijongs, Hādis, and Dālus—are found along the foot of the Gāro Hills. The Gāros are for the most part Animists, but the number so returned is diminishing, owing to the well-known tendency of the aboriginal tribes to adopt Hinduism as they approach civilization. Four-fifths of the population, or more than three million persons, are supported by agriculture, 10·2 per cent. by industries, 1 per cent. by commerce, and 1·3 per cent. by the professions.

Christian missions.

The Victoria Baptist Foreign Mission has been in the District since 1837, with three branches, at Nasīrābād, Tangail,

and Birisiri. Its work lies mainly among the Gāros; and the Christians enumerated in the District, who increased from 211 in 1891 to 1,291 in 1901, are mainly Gāro converts. Considerable attention is paid to education; a girls' orphanage is maintained at Nasīrābād, a normal school for Gāro teachers and a girls' boarding school at Birisiri, as well as a number of primary schools.

General agricultural conditions.

The greater portion of the District is a highly cultivated plain watered by the great rivers and their offshoots and feeders, but the Madhupur Jungle is for the most part waste. The north lies comparatively high and is generally above flood level, but the south is lower and is subject to annual inundations and deposits of fertilizing silt. In the neighbourhood of the big rivers the soil is a sandy loam, admirably suited for jute and spring crops.

Chief agricultural statistics and principal crops.

The chief agricultural statistics for 1903-4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Mymensingh . . .	1,849	1,124	180
Netrakonā . . .	1,148	477	164
Jamālpur . . .	1,289	758	125
Tangail	1,061	669	94
Kishorganj . . .	985	730	62
Total	6,332	3,758	625

Rice forms the staple food-grain of the District; the winter rice covers 44 per cent. of the cultivated area, early rice $15\frac{1}{2}$ per cent., and spring rice 5 per cent. The *aus* or early rice is sown from March to April and even May, and is reaped from the middle of May till the middle of September. The harvest takes place earliest in the west of the District, and latest in the southern tracts. In the east only two kinds of *aus* are cultivated—the *jali* and the *aus* proper; in the west the varieties are much more numerous, but all of them do best on a dry soil. Winter rice is sown in the late spring and reaped in the autumn and early winter; some of the varieties grow in marshy land, while the rest grow best in dry lands. The *rupā* or transplanted winter crop is grown in moist soil, being sown in June, transplanted a month or two later, and reaped in November, December, and January. The long-stemmed rice, which rises with the floods, is common in the deep swamps. The spring rice, locally known as *borā*, is sown early in the winter and reaped during the spring

months; it is a transplanted crop, and grows best in low marshy lands.

A fourth of the Bengal jute crop is raised in Mymensingh District, where the fibre occupies 1,015 square miles, or 27 per cent. of the cultivated area; it is grown in all parts, but particularly in the rich alluvial tracts formed by the Brahmaputra between Ghafargaon and Bhairab Bāzār. Oilseeds cover 19 per cent. of the cultivated area, yielding nearly an eighth of the rape and mustard grown in Bengal. Pulses are extensively grown, and a little wheat and barley are raised. There are considerable plantations of sugar-cane in the Husainshāhi and Joar Husainpur *parganas*. The betel-vine is cultivated, and tobacco is widely grown. Irrigation is little practised, except for the spring rice crop. Owing to the regular and copious rainfall, famine is unknown, while the exportation of jute and oilseeds brings large sums of money into the District; and there is consequently little need for Government loans.

Cattle.

No attention is given to the feeding or breeding of cattle, and the local varieties are weak and undersized. Young bulls are allowed to run among the herd before they are fit for the plough, and are the only sires of the young stock. In the cold season cattle are grazed on the rice stubble; but during the rains pasturage is very limited, and the cattle get only what they can pick up on the sides of marshes, tanks, and roads. In the submerged tracts they are fed on straw or grass. In the south-east of the District, however, there are considerable areas of rich pasture, where clarified butter (*ghī*) and the so-called 'Dacca cheeses' are prepared; in the Madhupur Jungle and Susang hills abundant pasturage is also available. Cattle of a better class, imported from Bihār, are in demand throughout the District; and buffaloes are also used for agricultural purposes, especially along the foot of the Gāro Hills. Pack-ponies of a small and weak variety are in common use.

A large number of fairs are held, some of considerable antiquity and largely attended. At the Saraswatī *mela* held in Nasīrābād in February, and at the Industrial and Agricultural Exhibition recently instituted at Tangail, agricultural produce and stock are exhibited for prizes.

Arts and manufactures.

In former times the muslins of Kishorganj and Bājitpur were of considerable note, and the East India Company had factories at both places; weaving is still widely practised and supports more than 30,000 persons. Silk cloth (*endi*) is woven at Sāndhikonā in the Netrakonā subdivision from wild cocoons. Fine *sītalpāti* mats are made on a large scale in the east and south-

east, where the marshes furnish an abundant supply of reeds (*Phrynium dichotomum*) for the purpose. Brass and bell-metal ware is manufactured at Islāmpur in the Jamālpur subdivision and at Kāgmāri in Tangail, and the cutlery of Kārgaon and Bājitpur in the Kishorganj subdivision has a local reputation. Cane boxes, molasses, and mustard oil are also prepared in some quantities.

Commerce. Trade is carried on chiefly by rail and river; where there are no rivers, carts and pack-ponies are used. The chief export is jute; in 1903–4 the amount carried direct to Calcutta exceeded 76,000 tons, and more than double this quantity was probably baled at Sirājganj and Nārāyanganj for export. Other exports are pulses, rice, oilseeds, hides, raw cotton, cheese, *ghī*, dried fish, and brass-ware. The principal imports are salt, kerosene oil, European piece-goods, cotton twist, molasses, sugar, corrugated iron, coal and coke from Calcutta; tobacco from Rangpur; raw cotton from the Gāro Hills; cotton, betel-nuts, and chillies from Tippera; and coconuts from the southern Districts. A large proportion of the trade with Calcutta is at present carried via Nārāyanganj, but the recent extension of the railway to Jagannāthganj will possibly in time divert this portion of the traffic to the more direct route via Goalundo. The large trade-centres mark the lines of water communication. SUBARNAKHĀLI, on the Jamunā and connected by road with both Jamālpur and Nasīrābād, is the principal emporium in the west of the District. NASĪRĀBĀD, the head-quarters town, and JAMĀLPUR are on the banks of the Old Brahmaputra, on which also lie Sāltia, a large cattle market, DATT'S BĀZĀR, and BHAIRAB BĀZĀR; the latter, at the point of the confluence with the Meghnā, is the largest and most important mart in the District. KĀTIĀDI, KARĪMGANJ, KISHORGANJ, and Nīlganj are markets whence large quantities of jute are sent via the Lakhyā and Meghnā to the presses at Nārāyanganj. In the east and south-east are Mohanganj and Dhuldiā, large fish markets; and in the north are Hāluāghāt, at the foot of the Gāro Hills, where the hillmen bring in their merchandise, NALITĀBĀRI, and SHERPUR. Among Hindus, the Telis and Sāhās are the chief trading castes; there is also a large community of Mārwāris. Middlemen and brokers are usually Musalmāns.

Railways and roads. The Dacca-Mymensingh branch of the Eastern Bengal State Railway (metre-gauge) enters the District at Kaoraid, whence it runs north through Nasīrābād to Jamālpur, and thence southwest to reach the Jamunā at Jagannāthganj, having a total

length within the District of $87\frac{1}{4}$ miles. The railway has already done much to open out the country, and the proposed extensions to Tangail and Netrakonā will develop those subdivisions. The railway has seventeen stations within the District, most of which are connected by feeder-roads with the marts of the interior. The most important roads are those connecting the head-quarters town with Dacca, Subarnakhāli on the Jamunā, Kishorganj via Iswarganj, Durgāpur, Tangail via Phulbāria, Jamālpur, and Netrakonā. Including 1,620 miles of village tracks, the District in 1903-4 contained 2,484 miles of roads, of which only 45 miles were metalled.

Water communications.

Steamers ply on the big rivers which flow along the east and west of the District. The most important of these are the daily services between Calcutta and Cāchār via the Sundarbans, and between Goalundo and Dibrugarh, both of which stop at several stations within the District. The usual country boats of Eastern Bengal are employed for trade, and dug-outs are used on the hill rivers in the north. There are 171 ferries, of which 5 are Provincial, while the remainder belong to the District board. The most important are those at Sambhuganj, Jamālpur, Husainpur, and Piārpur.

District subdivisions and staff.

For administrative purposes the District is divided into five subdivisions, with head-quarters at Nasīrābād, Netrakonā, Jamālpur, Tangail, and Kishorganj. They are of unusual size, having an average area of 1,266 square miles, and a population of 783,000. Subordinate to the Magistrate-Collector, the staff at head-quarters consists of a Joint-Magistrate, seven uncovenanted Deputy-Magistrate-Collectors, and one Sub-Deputy-Magistrate-Collector. Three of the Deputy-Magistrate-Collectors are employed exclusively on revenue work, and there is also a Deputy-Collector in charge of the partition work of both Dacca and Mymensingh. The other four subdivisions are each in charge of a Deputy-Magistrate-Collector, the subdivisional officer at Tangail being assisted by a Deputy-Collector, and at Netrakonā by a Sub-Deputy-Magistrate-Collector.

Civil and criminal justice.

Civil work is in charge of the District Judge, who is also Sessions Judge; subordinate to him are an additional District and Sessions Judge, three Subordinate Judges, one additional Subordinate Judge for both Farīdpur and Mymensingh, and nineteen Munsifs: namely, three at Mymensingh, and fifteen permanent Munsifs and one temporary Additional Munsif at Tangail, Netrakonā, Kishorganj, Bājitpur, Iswarganj, Pingnā, Jamālpur, and Sherpur. The criminal courts include those

of the Sessions Judge, the District Magistrate, and the above-mentioned Joint and Deputy-Magistrates. The wealth and the litigious habits of the people make the criminal and civil work very heavy, and disputes about land give rise to numerous and complicated cases. The District has gained an evil notoriety for kidnapping, abduction, and rape; and in 1899 it was found necessary to depute special officers to inquire into such cases.

Land revenue.

At Todar Mal's settlement of 1582 the present District fell within *sarkār* Bājūha, which also contained a portion of Dacca District, and it was subsequently included in the province of Dacca, from which it was not separated until 1787; the separate revenues collected by the Muhammadan government cannot therefore be ascertained. The revenue permanently settled in 1793 seems to have amounted to 7·20 lakhs, which in 1903–4 had risen to 7·68 lakhs (payable by 9,534 estates), mainly by the resumption and assessment in the first half of the nineteenth century of lands held free of revenue under invalid titles. In addition, Rs. 70,000 is payable by 178 temporarily settled estates, and Rs. 26,000 by 80 estates held direct by Government. At the time of the Permanent Settlement only a quarter of the District was cultivated, and the result is that the share of the net produce of the soil now taken as revenue is probably smaller than in any other part of Bengal. It is equivalent to only R. 0–5–8 on each cultivated acre, or 11·8 per cent. of the rental, which itself by no means represents the real value of the lands to the *zamīndārs*, as they impose a large premium, varying from Rs. 5 to Rs. 100 per acre, at the beginning of each tenancy. A few tenures are peculiar to the District. The *nagani jama tāluk*, an under-tenure held subject to a quit-rent, is a relic of the period when tenants were in demand, having been created by former Rājās of Susang to induce people to settle on their estates. A *dikhli tāluk* is an absolute transfer in consideration of the payment of a lump sum, in addition to rent fixed in perpetuity; and a *daisudhi ijāri* is a usufructuary mortgage either for a definite period or until repayment. Rents vary widely over the District, being highest in *pargana* Juānshābi, and lowest in *pargana* Khāliājuri. The rates for homestead land range from 9½ annas to Rs. 8–9–6; rice lands are divided into three classes, the rates varying from Rs. 1–14–9 to Rs. 4–5–6 for first-class lands, and from Rs. 1–3 to Rs. 2–7–6 for those of the third class.

The following table shows the collections of land revenue

and of total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	8,21	8,26	8,63	8,65
Total revenue . .	19,10	23,35	27,78	27,87

Outside the eight municipalities of NASĪRĀBĀD, JAMĀLPUR, SHERPUR, KISHORGANJ, BĀJITPUR, MUKTĀGĀCHA, TANGAIL, and NETRAKONĀ, local affairs are managed by the District board, with subordinate local boards at each of the subdivisional head-quarters. In 1903–4 the income of the District board was Rs. 3,81,000, of which Rs. 1,99,000 was derived from rates; and the expenditure was Rs. 4,37,000, including Rs. 2,63,000 spent on public works and Rs. 87,000 on education.

Local and municipal government.

There are 19 police stations or *thānas* and 11 outposts. The regular force subordinate to the District Superintendent in 1903 consisted of 6 inspectors, 77 sub-inspectors, 38 head constables, and 592 constables, including those employed for patrolling purposes within the municipal areas. The rural police numbered 714 head watchmen and 7,307 village watchmen. The District jail at Nasīrābād has accommodation for 550 prisoners, and the lock-ups at the subdivisional head-quarters for 89.

Police and jails.

Education is still backward, and in 1901 only 3·7 per cent. of the population (6·9 males and 0·4 females) could read and write. A considerable advance, however, has been made since 1881. Education is most backward in the north of the District, and among the Muhammadans, only 3·3 per cent. of whose males are able to read and write, compared with 16·2 per cent. among the Hindus. The total number of pupils under instruction, which was 54,284 in 1882–3 and 51,082 in 1892–3, increased to 65,812 in 1900–1. In 1903–4, 67,266 boys and 5,878 girls were at school, being respectively 22·2 and 2·0 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 2,618, including 2 Arts colleges, 133 secondary schools, and 2,255 primary schools. The expenditure on education was 3·84 lakhs, of which Rs. 26,000 was met from Provincial funds, Rs. 83,000 from District funds, Rs. 2,000 from municipal funds, and 1·98 lakhs from fees. The chief educational institutions are the Mymensingh Government school and City College at Nasīrābād and the Pramatha

Education.

Manmatha College at Tangail. Special institutions include 12 upper primary and 2 lower primary schools, maintained by the District board for the aboriginal tribes in the neighbourhood of the Gāro Hills and the Madhupur Jungle.

Medical. In 1903 the District contained 33 dispensaries, of which 14 had accommodation for 137 in-patients. The cases of 370,000 out-patients and 2,082 in-patients were treated, and 11,253 operations were performed. The expenditure was Rs. 49,000, of which Rs. 2,000 was met from Government contributions, Rs. 9,000 from Local and Rs. 11,000 from municipal funds, and Rs. 27,000 from subscriptions.

Vaccination. Vaccination is compulsory only within municipal areas. Elsewhere there is still some opposition to it, but 154,000 successful vaccinations were performed in 1903–4, representing 25·4 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. v (1875).]

Mymensingh Subdivision (*Maimansingh*).—Head-quarters subdivision of Mymensingh District, Eastern Bengal and Assam, lying between 24° 7′ and 25° 11′ N. and 89° 59′ and 90° 49′ E., with an area of 1,849 square miles. A large part of the subdivision consists of a level open plain, covered with well-cultivated fields and intersected by numerous small rivers and channels; but the south comprises the Madhupur Jungle, where the country is more elevated and contains large forest tracts. The population in 1901 was 977,476, compared with 853,020 in 1891. It contains two towns, NASĪRĀBĀD (population, 14,668), the head-quarters, and MUKTĀGĀCHA (5,888); and 2,367 villages. The density is only 529 persons per square mile, against an average of 618 for the District, owing to the inclusion of a large portion of the Madhupur Jungle, in parts of which there are only 277 persons per square mile, compared with 1,025 in the Nandail *thāna*. There are important markets at SAMBHUGANJ and DATT'S BĀZĀR.

Netrakonā Subdivision.—North-eastern subdivision of Mymensingh District, Eastern Bengal and Assam, lying between 24° 35′ and 25° 11′ N. and 90° 29′ and 91° 15′ E., with an area of 1,148 square miles. With the exception of a hilly tract in the north-east, where the Durgāpur *thāna* borders on the Gāro Hills, the subdivision is a flat alluvial plain. The population in 1901 was 574,771, compared with 536,568 in 1891. It contains one town, NETRAKONĀ (population, 11,402), the head-quarters; and 1,965 villages. The density is 501 persons per square mile, against an average

of 618 for the whole District; the most sparsely populated part is the Durgāpur *thāna*, which has only 299 inhabitants per square mile.

Jamālpur Subdivision.—North-western subdivision of Mymensingh District, Eastern Bengal and Assam, lying between 24° 43′ and 25° 26′ N. and 89° 36′ and 90° 18′ E., with an area of 1,289 square miles. The subdivision is an alluvial tract, intersected by numerous rivers and streams. The population in 1901 was 673,398, compared with 579,742 in 1891. It contains two towns, JAMĀLPUR (population, 17,965), the head-quarters, and SHERPUR (12,535); and 1,747 villages. The density is 522 persons per square mile, against 618 for the whole District. The ruins of an old mud fort, said to have been built by an independent Muhammadan chief, are still in existence at Garh Jaripā.

Tangail Subdivision.—South-western subdivision of Mymensingh District, Eastern Bengal and Assam, lying between 23° 57′ and 24° 48′ N. and 89° 40′ and 90° 14′ E., with an area of 1,061 square miles. The population in 1901 was 970,239, compared with 859,475 in 1891. Except on the east, which contains part of the Madhupur Jungle, the subdivision is an alluvial tract, subject to annual inundations and deposits of fertilizing silt from the Brahmaputra with its affluents and offshoots. It contains one town, TANGAIL (population, 16,666), the head-quarters, and 2,030 villages, and is the most densely populated part of the District, supporting 914 persons per square mile, against an average of 618 for the whole District. There is an important market at SUBARNAKHĀLI, and the terminus of the railway at JAGANNĀTHGANJ falls within the subdivision.

Kishorganj Subdivision.—South-eastern subdivision of Mymensingh District, Eastern Bengal and Assam, lying between 24° 2′ and 24° 38′ N. and 90° 35′ and 91° 16 E., with an area of 985 square miles. The population in 1901 was 719,184, compared with 643,381 in 1891. It contains two towns, KISHORGANJ (population, 16,246), the head-quarters, and BĀJITPUR (10,027); and 1,661 villages. It is an alluvial tract, intersected by marshes, and is subject to annual inundations and deposits of fertilizing silt from the Meghnā and its tributaries. It is, after Tangail, the most populous subdivision in the District, the density being 730 persons per square mile, against an average of 618 for the whole District. There are important markets at BHAIRAB BĀZĀR, KARĪMGANJ, and KĀTIĀDI.

Bājitpur.—Town in the Kishorganj subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 13′ N. and 90° 57′ E. Population (1901), 10,027. The town was formerly noted for its fine muslins, and the East India Company had a factory here. The industry has declined, but the *golābātān sāris* woven here still command a large sale. Bājitpur was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 2,950, and the expenditure Rs. 2,800. In 1903–4 the income was Rs. 4,500, of which Rs. 2,600 was derived from a tax on persons (or property tax); and the expenditure was Rs. 3,500.

Bhairab Bāzār.—Village in the Kishorganj subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 2′ N. and 90° 59′ E., where the Old Brahmaputra enters the Meghnā at the boundary junction of the three Districts of Dacca, Tippera, and Mymensingh. Population (1901), 618. It is the most important commercial mart of the District, possessing a large trade in jute and also in salt imported under bond. A large cattle market is held here.

Datt's Bāzār.—Mart in the head-quarters subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 21′ N. and 90° 37′ E., on the Old Brahmaputra, 37 miles from Nasīrābād town. Population (1901), 63. It is one of the principal marts in the south of the District, carrying on a large trade in jute with Nārāyanganj in Dacca.

Durgāpur.—Village in the Netrakonā subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 25° 8′ N. and 90° 41′ E., at the foot of the Gāro Hills on the Someswarī river. Population (1901), 422. It is the site of the palace of the Mahārājā of Susang.

Jagannāthganj.—Village in the Tangail subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 41′ N. and and 89° 46′ E., on the Brahmaputra. Population (1901), 609. It is the terminus of the Dacca-Mymensingh branch of the Eastern Bengal State Railway, and an important point of call for steamers.

Jamālpur Town.—Head-quarters of the subdivision of the same name in Mymensingh District, Eastern Bengal and Assam, situated in 24° 56′ N. and 89° 56′ E., on the west bank of the Old Brahmaputra. Population (1901), 17,965. It is connected with Nasīrābād, 33 miles distant, by a good road and also by the Dacca-Mymensingh branch of the Eastern Bengal State Railway, which has recently been extended to the Brahmaputra at Jagannāthganj. Jamālpur was

constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 11,700, and the expenditure Rs. 10,300. In 1903–4 the income was Rs. 12,000, mainly derived from a property tax and a conservancy rate; and the expenditure was Rs. 11,000. Jamālpur was a military station prior to the Mutiny. The town possesses the usual public buildings. The sub-jail, which was once the magazine, is a specimen of the solid masonry of an early period; it has accommodation for 27 prisoners.

Karīmganj.—Village in the Kishorganj subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 28′ N. and 90° 52′ E., 9 miles east of Kishorganj. Population (1901), 136. It is a large bazar and reed and jute mart, and has given its name to a well-known variety of jute.

Kātiādi.—Village in the Kishorganj subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 15′ N. and 90° 48′ E. Population (1901), 1,472. It is one of the most frequented bazars in the south of the District.

Kishorganj Town.—Head-quarters of the subdivision of the same name in Mymensingh District, Eastern Bengal and Assam, situated in 24° 26′ N. and 90° 46′ E., on the Kundāli Khāl, 13 miles east of the Brahmaputra. Population (1901), 16,246. An annual fair is held here during the Jhulanjātra, a festival in honour of Krishna lasting for a month from the middle of July to the middle of August. Kishorganj is connected with the Brahmaputra by a road and also by the Kundāli Khāl, which is navigable during the rainy season. The town was formerly noted for its muslin manufactures, and the East India Company had a factory here. Kishorganj was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 6,500, and the expenditure Rs. 6,200. In 1903–4 the income was Rs. 8,000, of which Rs. 4,600 was obtained from a property tax; and the expenditure was Rs. 7,800. The town contains the usual public offices; the sub-jail has accommodation for 22 prisoners.

Madhupur.—An extensive jungle, known also as the 'Garh Gazāli,' in Eastern Bengal and Assam, stretching northwards from the northern part of Dacca into the heart of Mymensingh District, almost as far as the town of Nasīrābād. The tract is slightly elevated, averaging about 40 feet above the level of the surrounding plain, with small hills nowhere exceeding 100 feet in height. It belongs to an older alluvial formation than the rest of the country, and consists of a stiff layer of red ferru-

ginous clay of a considerable depth, resembling that of the Bārind in North Bengal. It is covered with a dense forest of tall trees overrun with creepers, with numerous large grasses at their base. The forest is similar in composition to that under the Himālayan range, containing a mixture of *Leguminosae*, *Combretaceae*, *Anacardiaceae*, *Urticaceae*, *Meliaceae*, and *Sapindaceae*. The chief tree is the *sāl* (*Shorea robusta*), which grows throughout the tract and supplies timber and charcoal. The open parts make good pasture grounds in the cold season, and a considerable trade is carried on in beeswax and honey. In recent years it has been opened up to some extent by roads leading to the railway, and portions of it have been brought under cultivation.

Muktāgācha.—Town in the head-quarters subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 46′ N. and 90° 15′ E., on the road from Nasīrābād to Subarnakhāli. Population (1901), 5,888. Though the town was constituted a municipality in 1875, the population is poor and rural. The income during the decade ending 1901–2 averaged Rs. 6,500, and the expenditure Rs. 6,000. In 1903–4 the income was Rs. 8,000, of which Rs. 4,500 was obtained from a property tax; and the expenditure was Rs. 7,000.

Nalitābāri.—Village in the Jamālpur subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 25° 5′ N. and 90° 13′ E., about 13 miles north-east of Sherpur. Population (1901), 620. It is one of the most important marts in the north of the District, and a large quantity of cotton produced in the Gāro Hills is brought to market here, as well as all kinds of country produce.

Nasīrābād.—Head-quarters of Mymensingh District, Eastern Bengal and Assam, situated in 24° 46′ N. and 90° 24′ E., on the west bank of the Old Brahmaputra. Population (1901), 14,668. The Dacca section of the Eastern Bengal State Railway passes through the town. Nasīrābād was constituted a municipality in 1869, and has hitherto been known by that name; but recently it was decided to change its designation to that of the Mymensingh municipality. The income during the decade ending 1901–2 averaged Rs. 50,000, and the expenditure Rs. 49,000. In 1903–4 the income was Rs. 77,000, including Rs. 9,000 derived from a property tax, Rs. 10,000 from a conservancy rate, Rs. 3,000 from a tax on houses and lands, and Rs. 11,000 from a water rate. The incidence of taxation was Rs. 2–7–8 per head of the population. In the same year the expenditure was Rs. 81,000, the chief items

being Rs. 2,000 spent on lighting, Rs. 3,000 on drainage, Rs. 12,000 on conservancy, Rs. 14,000 on medical relief, Rs. 3,000 on roads, Rs. 13,000 on buildings, and Rs. 28,000 on water-supply. The system of water-supply, constructed in 1893 at a cost of 1·42 lakhs, was presented to the town by Mahārājā Sūrjya Kānta Achārjya.

The town possesses the usual public buildings. In the District jail, which has accommodation for 550 prisoners, the chief industries carried on are oil-pressing, carpet- and cloth-weaving, mat and cane chair-making, brick-making, and brick-pounding. The products are disposed of locally. The chief educational institutions are the Mymensingh Government school, established in 1853, with 301 pupils on the rolls at the end of 1904; and the City College of Mymensingh, established in 1901, with 120 students, which is affiliated to the Calcutta University and teaches up to the First Arts standard. The Nasīrābād charitable dispensary, with 24 beds, an eye infirmary, and a female ward, was maintained in 1903 at a cost of Rs. 11,000; at this institution 836 in-patients and 21,000 out-patients were treated during the year.

Netrakonā Town.—Head-quarters of the subdivision of the same name in Mymensingh District, Eastern Bengal and Assam, situated in 24° 53′ N. and 90° 45′ E. Population (1901), 11,402. Netrakonā was constituted a municipality in 1887. The income during the decade ending 1901–2 averaged Rs. 5,700, and the expenditure Rs. 5,200. In 1903–4 the income was Rs. 9,000, mainly derived from a property tax and a conservancy rate; and the expenditure was Rs. 7,000. The town possesses the usual public buildings; the sub-jail has accommodation for 22 prisoners.

Sambhuganj.—Village in the head-quarters subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 46′ N. and 90° 27′ E., 3 miles east of Nasīrābād. Population (1901), 500. It is one of the busiest marts in the District for country produce of all kinds, exporting large quantities of jute, and also of rice and mustard-seed.

Sherpur.—Town in the Jamālpur subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 25° 1′ N. and 90° 1′ E., between the Shirī and Mirghi rivers, about half a mile from the former and a mile from the latter, 9 miles north of Jamālpur. Population (1901), 12,535. There is a considerable river trade, the exports being chiefly jute, rice, and mustard-seed, and the imports, European piece-goods and betel-nuts. Sherpur was constituted a municipality in

1869. The income during the decade ending 1901–2 averaged Rs. 7,800, and the expenditure Rs. 7,400. In 1903–4 the income was Rs. 10,700, mainly derived from a property tax and a conservancy rate; and the expenditure was Rs. 11,400.

Subarnakhāli.—Village in the Tangail subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 33′ N. and 89° 49′ E., on the Jamunā river, 44 miles west of Nasīrābād, with which place and Jamālpur it is connected by tolerably good roads. Population (1901), 1,317. A considerable import and export trade in jute is carried on.

Tangail Town.—Head-quarters of the subdivision of the same name in Mymensingh District, Eastern Bengal and Assam, situated in 24° 15′ N. and 89° 57′ E., on the Lohajang, a branch of the Jamunā. Population (1901), 16,666. It is the centre of a considerable trade, especially in European piece-goods. Tangail was constituted a municipality in 1887. The income during the decade ending 1901–2 averaged Rs. 7,400, and the expenditure Rs. 6,800. In 1903–4 the income was Rs. 10,000, mainly derived from a property tax and conservancy rate; and the expenditure was Rs. 9,000. The town contains the usual public offices; the sub-jail has accommodation for 18 prisoners. The chief educational institution is the Pramatha Manmatha College, with 98 students on its rolls at the end of 1904; it was established in 1900, and is maintained, at an annual cost of Rs. 5,000, at the expense of its founder. It is affiliated to the Calcutta University and teaches up to the F. A. standard.

Boundaries, configuration, and river system.

Farīdpur District.—District in the Dacca Division of Eastern Bengal and Assam, lying between 22° 51′ and 23° 55′ N. and 89° 19′ and 90° 37′ E., with an area of 2,281 square miles. It is bounded on the north by the Padmā or main stream of the Ganges; on the east by the Meghnā; on the west by the Garai river, with its continuation the Madhumatī and its branch the Bārāsia, which separate it from the Districts of Nadiā and Jessore; and on the south by Backergunge.

Farīdpur is essentially a fluvial creation, and exhibits the later stages in the formation of the Gangetic delta. In the north and east the land is comparatively well raised, and is high and dry except during the rains; but the level sinks towards the south, and, on the confines of Backergunge, the whole country is one vast marsh intersected by strips of high land, the deposits of the rivers that have at different times flowed through the tract. The marshes are slowly but steadily silting up, and are being reclaimed for cultivation. The

inhabitants build their houses on the higher land of the river banks, or on mounds from 12 to 20 feet high laboriously thrown up during the dry months; and in the rains these homesteads alone rise above the waste of waters topped with grass or rice.

With the exception of the MEGHNĀ, the river system is that of the PADMĀ, one branch of which in the lower reaches is called the Kīrtināsā or 'destroyer of antiquities,' owing to the ravages it has wrought among the palaces, temples, and monuments of Rājā Rāj Ballabh of Rājnagar, one of the old capitals of Eastern Bengal. This, the MADHUMATĪ, the Garai, and the Ariāl Khān are large rivers, navigable throughout the year by trading boats of 4 tons burden; but there are numerous minor ramifications, the principal of which are the Chandnā, the Bhubaneswar, the Marā (or 'dead') Padmā or Pālang, and the Nayā Bhāngni (or 'new cut'). The interior is drained by a network of small waterways, such as the Kumār, the Sītālakhya, another Marā Padmā, and the Jakhlā, all of which flow ultimately into the Ariāl Khān. The southern marshes, known as the Nasībshāhi, the Atādānga, and the Kājaliā swamps, are drained by the Ghāgar or Saildaha river, which falls into the Madhumatī.

The District consists of recent alluvium, composed of sandy clay and sand along the course of the rivers and fine silt consolidating into clay in other parts of the river plain, while in the marshes beds of impure peat commonly occur. Geology.

Almost all the trees and plants common to Lower Bengal grow here. Marsh plants and weeds are found in great variety and luxuriance; and in the south the surface of the marshes either shows huge stretches of inundated rice, or is covered with matted floating islets of sedges and grasses and various water-lilies, the most striking of these being the *makana* (*Euryale ferox*). The artificial mounds on which habitations are situated are, where not occupied by gardens, densely covered with a scrub jungle of semi-spontaneous species, with a few taller trees, among which the commonest is the *jiyal* (*Odina Wodier*) and the most conspicuous the red cotton-tree (*Bombax malabaricum*). Palms are common, the chief species being the date-palm (*Phoenix acaulis*) in the north, and the betel-nut (*Areca Catechu*) in the south. Mangoes of an inferior quality abound and plantains are grown round every house, both on the mainland and the river flats, while dense clusters of bamboos surround and overshadow every village. Tall casuarinas (*Casuarina muricata*) mark the sites of old indigo factories and line the roads. Botany.

Fauna. Leopards still lurk in the jungles in the north and west of the District, and occasionally a tiger breaks cover from the Sundarbans and takes refuge in the southern marshes. Wild hog devastate the crops, especially in the Farīdpur, Bhūshanā, and Ainpur *thānas*. Crocodiles, both of the man-eating and fish-eating species, swarm in the large rivers, which teem with fish, the *hilsa* being an important article of export to Calcutta.

Temperature and rainfall. Humidity ranges high from April to October. The mean temperature remains at 83° from April to September, but falls during the cold season to 66°, the mean minimum being lowest (53°) in January. Rainfall commences early in the hot season; the average is 8·5 inches in May, 12·2 in June, 11·8 in July, 11·5 in August, and 8·1 in September, the total for the year being 66 inches. The District is always inundated when the rivers rise in the rainy season, but the floods seldom cause more than local damage; and they are in fact beneficial, as they cover the country with a rich alluvial deposit, which is gradually raising the level of the swamps.

History. Very little is known of the earlier history of Farīdpur. The eastern subdivision of Mādārīpur was once an apanage of BIKRAMPUR, and the District was subsequently included in the ancient kingdom of Banga (called Samatata by Hiuen Tsiang) which has given its name to the modern Province of Bengal. Its people are described in the Raghubansa as living in boats, and they were clearly the ancestors of the Chandāls, who are still very numerous in this part of the country. Farīdpur passed under Muhammadan rule with the rest of Eastern Bengal at the beginning of the fourteenth century; and in 1582, at the time of Todar Mal's settlement, it appears to have been included within the *sarkār* of Muhammadābād or Bhūshanā. In the reign of Jahāngīr a number of chiefs, most of whom were Hindus, known to local tradition as the Bāra ('twelve') Bhuiyās, established independent principalities in East Bengal; and among them two brothers, Chānd Rai and Kedār Rai, extended their sway from Rājābāri in the District of Dacca to Kedārbāri, now in the Pālang *thāna* of Farīdpur, where a deep ditch and the remains of a road known as Kāchkigurā Road mark the site of their residence or fort. The remains of a fort of Rājā Sītā Rām Rai, another of the Bhuiyās, can still be seen at Kilābāri in the Bhūshanā *thāna*; he was overthrown by the Mughals in a pitched battle at a place still known as Fatehpur ('town of victory'). For two centuries after the Muhammadan advent, the country was overrun by the Maghs or Arakanese, and their depredations

drove the people into the inaccessible marshes, where protective moats are still to be seen at Ujāni in Maksūdpur and at Kotwālīpāra. Up to 1790 the present District was included in the tract known as Dacca Jalālpur, with the exception of the present *thāna* of Bhūshanā and part of Maksūdpur which were included in Jessore, and the Gopīnāthpur *pargana* which belonged to Backergunge. The separate existence of the District dates from 1811, when courts were built at Farīdpur, and the tract east of the Chandnā was transferred from Jessore. Subsequently, when the territory east of the Padmā was given up to Dacca, the District became known as Farīdpur. About this time Gopīnāthpur was received from Backergunge, and there were various subsequent changes of jurisdiction, the Mādārīpur subdivision being transferred from Backergunge in 1874, and the Krokīchar outpost from Dacca in 1895. The Padmā river has of late years been steadily encroaching towards Dacca and receding from this District, which has thus received a large accession of area.

The people.

The population increased from 1,530,288 in 1872 to 1,660,037 in 1881, 1,823,715 in 1891, and 1,937,646 in 1901. Malarial fever is prevalent, especially in the north and west of the District, and the decrease in the rate of progress in the last decade was due to the growing unhealthiness of this tract.

The chief statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Farīdpur	860	1	2,299	712,226	828	+ 6.8	36,604
Goalundo	428	...	1,178	319,285	746	− 9.2	16,995
Mādārīpur	993	1	1,806	906,135	913	+ 12.5	46,267
District total	2,281	2	5,283	1,937,646	849	+ 6.2	99,866

The two towns are FARĪDPUR, the head-quarters, and MĀDĀRĪPUR. The density of population is greater than in any other part of Eastern Bengal, except Dacca District; the most crowded areas lie in the Mādārīpur subdivision. The whole of the Goalundo subdivision and the Bhūshanā *thāna* in the head-quarters subdivision belong to a decadent tract, where the population is diminishing; and there is an equally unhealthy area in the Pālang *thāna* to the east of the Mādārīpur subdivision, which, however, has received extensive alluvial

accretions. Several other *thānas*, such as Sibchar and Bhānga, have grown in the same way, and possess an area considerably in excess of that with which they are credited in the records of the Survey department, and on which the census calculations of density were based. A number of immigrants from Dacca, whose houses on the north bank of the Padmā have been destroyed by the erosion of the river, have crossed to the Farīdpur side; and there is an annual influx of earth-workers, *pālki*-bearers, and other unskilled labourers from Bihār and the United Provinces. A similar exodus takes place from Farīdpur to Backergunge. The vernacular spoken consists of the dialects known as Eastern or Musalmāni, and East-Central, Bengali. Nearly 62 per cent. of the inhabitants are Muhammadans and, as elsewhere, the proportion is steadily increasing; in 1901 they numbered 1,199,351, and Hindus 733,555.

Castes and occupations.

The vast majority of the Muhammadans are Shaikhs (1,113,000), though Jolāhās (58,000) are also numerous, doubtless in the main the descendants of converted Chandāls or Namasūdras, who are still so numerous that they include more than three-sevenths of the whole Hindu population. These people, who are chiefly found in the Mādārīpur subdivision and in the southern marshes, are among the hardiest and most healthy of the Hindus, and are struggling hard to improve their social status, which is at present a very low one. Brāhmans (51,000) and Kāyasths (85,000) are most numerous in the Mādārīpur and Pālang *thānas*, formerly part of the Bikrampur *pargana*; the men of these castes emigrate in large numbers in search of clerical employment. Sāhās (36,000), the great mercantile caste, are also numerous. Nearly 1½ millions, or 77 per cent. of the District population, are dependent upon agriculture for their livelihood, 12 per cent. on industry, 1 per cent. on commerce, 2 per cent. on the professions, and 3 per cent. on unskilled labour.

Christian missions.

The Australian Baptist Mission works at Farīdpur, the Baptist Mission at Mādārīpur, and the Evangelistic Mission at Gopālganj; and their converts, who are mainly Chandāls, have increased during the last decade from 3,500 to 4,600. The activity of these missions, however, is not to be gauged simply by the number of their converts, for they have also done a great deal in the cause of education.

General agricultural conditions.

The soil is generally a rich loam, with a deposit of vegetable mould in the marshy area. The comparatively high lands in the north-west and centre are well-wooded; here, except in a few depressions where winter rice is grown, two crops are

usually obtained, rice or jute being harvested in July or August, and oilseeds, pulses, wheat, or barley in February. In recently reclaimed alluvial lands the alternation of crops is similar; but low lands which are flooded early yield only spring rice, which is reaped in May or June. In the southern marshes early and late rice are sown together in April. The plants grow with the rise of the flood, and the early crop ripens in August and is reaped from boats. The late rice ripens in October or November, and so much of the stalks as is then above the water is cut; the rest rots, and is burnt and ploughed in when the water has subsided.

The chief agricultural statistics for 1903-4 are shown below, in square miles:— Chief agricultural statistics and principal crops.

Subdivision.	Total.	Cultivated.	Cultivable waste.
Farīdpur . . .	860	660	37
Goalundo . . .	428	329	18
Mādārīpur . . .	993	763	42
Total	2,281	1,752	97

Rice occupies five-sixths of the cultivated area, the winter crop accounting for three-fifths of the whole. After rice, jute is the crop most extensively grown; its cultivation has increased very rapidly of late years, and it now occupies 148 square miles. Pulses are an important cold-season crop, especially *māskalai* (*Phaseolus radiatus*); some of this is consumed or exported, but the greater part is grazed by cattle. Rape and mustard and sugar-cane are also largely grown.

Little cultivable land remains untilled; the marshes are ploughed as soon as they silt up sufficiently, and newly formed alluvial lands are cultivated the moment they become fit to bear crops. In Government estates attempts have been made to introduce new cereals and vegetables, and seeds have been freely distributed, but without much result. There is generally little need for Government loans, as the land is very fertile, yielding rich harvests with very little toil, and wealth is evenly distributed; but Rs. 23,000 was advanced in 1893-4 and Rs. 14,000 in 1897-8 under the Agriculturists' Loans Act. Improvements in agricultural practice.

The indigenous breed of cattle is very poor, and very little has been done to improve it, though the richer farmers occasionally introduce better animals from Bhāgalpur. The only fair of any importance is that held at Farīdpur in January and February in connexion with an Agricultural Exhibition, at Cattle.

which prizes are given for agricultural produce, implements, and cattle, and also to weavers and other handicraftsmen.

Arts and manufactures.

Hand-weaving supports 53,000 persons, a larger number than in any other District of Bengal. The industry is carried on chiefly by the Muhammadan Jolāhās, who manufacture, in addition to coarse cotton cloths for local use, a large quantity of a cotton check, known as *chārkhāna*, which finds a ready sale in Calcutta. A fine variety of *sītalpāti* (*Phrynium dichotomum*) mats is made in the Bhūshanā *thāna*, and the Namasūdras weave coarse mats of bamboos, canes, and reeds; gunny-bags are also manufactured, chiefly by the Kapāli caste. A good deal of gold and silver jewellery, brass-, copper-, and ironwork, and pottery is made for local use; and boat-building is an important industry. There are no factories, but a few jute hand-presses have recently been introduced.

Commerce.

The bulk of the trade is with Calcutta. Jute forms the principal export, rice, pulses, oilseeds, and fish being the articles of next importance. The chief imports are European cotton piece-goods, salt, kerosene oil, corrugated iron, molasses and sugar, coal and coke from Burdwān, Mānbhūm, and Assam, common rice from Bogra and Dinājpur, and fine rice and timber from Barisāl. The Calcutta trade is carried by the Eastern Bengal State Railway, by country boats via Khulnā, or by the steamer services. GOALUNDO, the terminus of the railway and of several important steamer routes, is a focus through which an enormous volume of trade passes, and MĀDĀRĪPUR is growing in importance. Other important trade centres are FARĪDPUR, Pāngsa, Belgāchi, RĀJBĀRI, and Pāchuriā on the railway; Sadarpur on the banks of the Bhubaneswar; Jamālpur, Madhukhāli, and Kāmārkhāli on the Chandnā; Saiyidpur and Boālmāri on the Jessore road; Kānaipur, Jaynagar, and Bhānga on the Kumār; Gopālganj, Bhātiāpāra, and Pātghāti on the Madhumatī; Pālang on the Pālang; and Mulfatganj inland. The middlemen who purchase agricultural produce from the cultivators are usually Muhammadans or Namasūdras. Agents of European firms in Calcutta are employed to buy jute, and Sāhās and Mārwāris also do wholesale business. In the drier parts of the District bullock-carts and pack-ponies are occasionally used, but boats are the almost universal means of carriage; during the rains every village is accessible by water and boat traffic is very brisk, stocks being purchased at that season for the whole year's consumption.

Railways and roads.

The Eastern Bengal State Railway (broad gauge) enters the District near Māchpāra and crosses the north-west corner to

its terminus at Goalundo on the Padmā; from Pāchuriā a branch line runs to Farīdpur town. The principal roads are those from Farīdpur to Jessore, Rājbāri, and Bhānga, and from Kānaipur to Pāngsa. Exclusive of village and municipal roads, the District contains only 182 miles of roads, of which 10 miles are metalled. As already stated, most of the traffic is carried by water.

Water communications. The steamer services from Goalundo down the Padmā touch at various places within the District, and a branch line plies to Mādārīpur. An important route, known as the Kumār-Madhumatī Bīl route, carries most of the jute from the south of the District to Khulnā. A connecting canal, estimated to cost 20 lakhs, is under construction, but as yet it can only be used by steamers during the rainy season (*see* CALCUTTA AND EASTERN CANALS).

District subdivisions and staff. For administrative purposes the District is divided into three subdivisions, with head-quarters at FARĪDPUR, RĀJBĀRI (Goalundo), and MĀDĀRĪPUR. Under the District Magistrate-Collector the staff consists of six Deputy-Magistrate-Collectors, of whom four are stationed at head-quarters, and two are in charge of the Goalundo and Mādārīpur subdivisions respectively; a Sub-Deputy-Collector is stationed at Farīdpur and another at Mādārīpur.

Civil and criminal justice. For civil work the courts subordinate to the District and Sessions Judge are those of a Sub-Judge and two Munsifs at Farīdpur, two Munsifs each at Goalundo, Mādārīpur, and Chikāndi, and four Munsifs at Bhānga. The criminal courts include those of the District and Sessions Judge, the District Magistrate, and the above-mentioned Deputy-Magistrates. Land disputes give rise to a large number of civil and criminal cases, and not infrequently lead to riots attended with bloodshed and loss of life; such disputes are especially numerous and bitter on the alluvial formations in the great rivers.

Land revenue. At the time of the Permanent Settlement, Farīdpur was included in the province of Dacca; owing to the large amount of waste land at that time, the assessment was very small, and the incidence is consequently very low, being only R. 0-8-8 per cultivated acre or a quarter of the average rental. Of 5,998 estates, only five pay a revenue of over Rs. 10,000, and estates are being rapidly disintegrated under the working of the partition law. In 1903-4 the total current demand was 6·09 lakhs, of which 4·30 lakhs was due from 5,598 permanently settled estates, Rs. 38,000 from 147 estates temporarily settled with proprietors and middlemen, and the

remainder from 234 estates directly managed by the Collector. The land revenue is liable to constant fluctuations, owing to alluvion and diluvion. The average rent paid for rice lands is Rs. 3 per acre, but for inferior sandy soil it is sometimes as low as 6 annas. For raised homestead and sugar-cane lands the rates range ordinarily between Rs. 4–8 and Rs. 7–8, but rise in some places to Rs. 9 or even more.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	5,63	5,93	6,14	6,20
Total revenue . .	10,16	11,82	14,51	14,71

Local and municipal government.

Outside the municipalities of FARĪDPUR and MĀDĀRĪPUR, local affairs are managed by the District board, with subordinate local boards in the three subdivisions. In 1903–4 its income was Rs. 1,29,000, of which Rs. 63,000 was obtained from rates; and the expenditure was Rs. 1,45,000, including Rs. 61,000 spent on public works and Rs. 47,000 on education.

Police and jails.

The District contains 13 police stations or *thānas*, and 6 outposts. In 1903 the force under the District Superintendent consisted of 4 inspectors, 44 sub-inspectors, 29 head constables, and 355 constables, maintained at a total cost of Rs. 1,15,000; there was one policeman to 8·2 square miles, and to 7,045 of the population. There was, in addition, a rural police of 446 *daffadārs* and 4,392 *chaukīdārs*. The District jail at Farīdpur has accommodation for 321 prisoners, and subsidiary jails at Mādārīpur and Rājbāri for 58.

Education.

Education made great strides between 1881 and 1901. In the latter year 5·1 per cent. of the population (9·7 males and 0·6 females) could read and write. The total number of pupils under instruction increased from about 14,500 in 1882 to 37,774 in 1892–3 and to 38,502 in 1900–1; and 51,518 boys and 5,995 girls were at school in 1903–4, being respectively 35·4 and 4·1 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,968: namely, 105 secondary, 1,656 primary, and 207 special schools. The total expenditure on education was 2·57 lakhs, of which Rs. 25,000 was met from Provincial funds, Rs. 46,000 from District funds, Rs. 700 from municipal funds, and Rs. 1,42,000 from fees. The Muhammadans are far more backward than the Hindus, who in proportion to their

numbers have six times as many males able to read and write; less than a third of the pupils in the schools are Musalmāns, though nearly two-thirds of the population profess that religion.

The District contained 19 dispensaries in 1903, of which 4 had accommodation for 89 in-patients. These include the Kumār floating dispensary, which moves about on the Kumār river dispensing medical relief to the inhabitants of the extremely unhealthy areas on its banks. The cases of 164,000 out-patients and 972 in-patients were treated during the year, and 5,223 operations were performed. The total expenditure was Rs. 32,000, of which Rs. 8,000 was met from Government contributions, Rs. 11,000 from Local and Rs. 1,600 from municipal funds, and Rs. 9,000 from subscriptions. Medical.

Vaccination is carried on under difficulties, the majority of the population being Muhammadans of the Farāzi sect, who are extremely averse to vaccination. It is, however, making great progress; and, though it is compulsory only in the two municipalities, 119,000 persons, or 62·3 per 1,000 of the population, were successfully vaccinated in 1903–4. Vaccination.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. v (1875).]

Farīdpur Subdivision.—Head-quarters subdivision of Farīdpur District, Eastern Bengal and Assam, lying between 23° 8′ and 23° 42′ N. and 89° 30′ and 90° 12′ E., with an area of 860 square miles. The whole of the subdivision is an alluvial formation, comparatively high to the east, but very marshy in the interior. The population in 1901 was 712,226, compared with 666,594 in 1891. The subdivision contains one town, FARĪDPUR (population, 11,649), the head-quarters; and 2,299 villages. The density of population is high (828 persons per square mile), rising to 1,223 in Bhānga *thāna* in the north, and not falling below 600 even in the swampy tracts in the south.

Goalundo Subdivision.—Western subdivision of Farīdpur District, Eastern Bengal and Assam, lying between 23° 32′ and 23° 55′ N. and 89° 19′ and 89° 49′ E., with an area of 428 square miles. The population in 1901 was 319,285, compared with 351,620 in 1891; the number of villages is 1,178, including RĀJBĀRI, the head-quarters. The subdivision, which is bounded on the north and east by the Padmā, is a fertile alluvial tract possessing a rich, light loamy soil. The surface is high compared with that of the other subdivisions, but the climate is very unhealthy, malarial fever being prevalent, and the density of population (746 persons per square

mile) is consequently less than elsewhere in the District. The subdivision is served by the eastern section of the Eastern Bengal State Railway, and by steamers. GOALUNDO village is an important railway and steamer station and the focus of several trade routes; other trade centres are Pāngsa and Belgāchi.

Mādārīpur Subdivision.—South-eastern subdivision of Farīdpur District, Eastern Bengal and Assam, lying between 22° 51′ and 23° 29′ N. and 89° 45′ and 90° 37′ E., with an area of 993 square miles. The subdivision is a low-lying alluvial tract, and in the south the country is an immense swamp, intersected by strips of high land along the banks of the rivers which once flowed through this tract. The population in 1901 was 906,135, compared with 805,501 in 1891. The subdivision contains one town, MĀDĀRĪPUR (population, 17,463), the head-quarters and a flourishing mart; and 1,806 villages. With 913 persons per square mile, the subdivision is more thickly populated than the rest of the District; the density in the north rises as high as 1,406, but drops to 649 in the swamps to the south. With Munshiganj, the adjoining subdivision of Dacca District, Mādārīpur originally formed part of the *pargana* of Bikrampur. It was transferred from Backergunge District in 1874. The great features of the subdivision are the magnificent river system and the *bīls* or marshes studded with houses built on artificial mounds raised along the boat routes. Jute is grown in large quantities and forms the chief article of commerce. The Madhumatī-Kumār Bīl route, recently opened to connect with the Eastern Bengal State Railway at Khulnā, has given a new impetus to trade. Besides the head-quarters town, other centres of trade are Dhumaria, Ghāgar, Mustafapur, Pālang, Bhojeswar, Angariā, Gosairhāt, Bhedarganj, and Sibchar.

Farīdpur Town.—Head-quarters of Farīdpur District, Eastern Bengal and Assam, situated in 23° 37′ N. and 89° 51′ E., on the west bank of the Marā ('dead') Padmā. Population (1901), 11,649. Farīdpur takes its name from a Muhammadan saint, Farīd Shāh, whose shrine it contains. The town is connected with the main line of the Eastern Bengal State Railway by a branch from Pāchuriā. It was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 14,500, and the expenditure Rs. 13,500. In 1903–4 the income was Rs. 19,000, of which Rs. 6,000 was derived from a property tax, and Rs. 5,000 from a conservancy rate; and the expenditure was Rs. 19,800.

A water-filter has been constructed at a cost of Rs. 10,000, and a second is under construction. The town contains the usual public offices; the District jail has accommodation for 321 prisoners, who are employed on cloth and carpet-weaving, brick-making and pounding, oil-pressing, and the manufacture of cane furniture and coco-nut fibre mats.

Goalundo Village.—Village in the subdivision of the same name in Farīdpur District, Eastern Bengal and Assam, situated in 23° 51′ N. and 89° 46′ E., near the junction of the main streams of the Padmā, as the Ganges is here called, and the Brahmaputra. Population (1901), 5,036. Goalundo is the terminus of the Eastern Bengal State Railway and of several important steamer routes, and is a mart through which an enormous volume of trade passes. Daily services of steamers connect it with the railway systems at Nārāyanganj and Chānd-pur, and with the steamer services to Mādārīpur, Barisāl, Sylhet, and Cāchār. There are also daily services of steamers up the Padmā to Dīgha Ghāt in the dry season, and Buxar in the rains, and up the Brahmaputra to Dibrugarh. Formerly Goalundo was situated exactly at the junction of the Padmā and Brahmaputra, and an enormous sum was expended in protecting the site from erosion. But in 1875 the spur was washed away; and since that date the terminus, though still called Goalundo, has shifted twice annually, the present site being 7 miles south of the former one. The subdivisional and railway head-quarters, which were formerly at Goalundo, have been removed inland to RĀJBĀRI. Goalundo contains a very large bazar and the railway and steamer officers' quarters, which follow the terminus in its wanderings. The trade is one of transhipment, the principal commodities dealt with being jute, oilseeds, and food-grains. An enormous quantity of *hilsa* fish is exported to Calcutta. The trade is mainly in the hands of Mārwāri and Bengali merchants. Coolies travelling to the Assam tea gardens pass through Goalundo, and an Emigration officer is stationed here.

Mādārīpur Town.—Head-quarters of the subdivision of the same name in Farīdpur District, Eastern Bengal and Assam, situated in 23° 11′ N. and 90° 13′ E., at the junction of the Ariāl Khān and Kumār rivers. Population (1901), 17,463. Mādārīpur is the centre of a flourishing jute trade and is a rapidly increasing town, but its safety is threatened by the inroads of the Ariāl Khān. There are two markets, and a brisk trade is carried on with the interior by country boats. Trade is chiefly in the hands of native merchants, one

of whom keeps a salt *golā*, but Europeans have a large share of the jute business. A small line of steamers connects the town with the Nārāyanganj-Goalundo and Barisāl-Khulnā services; another links it up with the Khulnā terminus of the Eastern Bengal State Railway. Mādārīpur was constituted a municipality in 1875. The income during the decade ending 1901-2 averaged Rs. 9,600, and the expenditure Rs. 9,500. In 1903-4 the income was Rs. 12,200, including Rs. 5,000 derived from a property tax, and Rs. 2,000 from a conservancy rate; and the expenditure was Rs. 12,700. The town contains the usual public offices; the sub-jail has accommodation for 36 prisoners.

Rājbāri.—Head-quarters of the Goalundo subdivision of Farīdpur District, Eastern Bengal and Assam, situated in 23° 46′ N. and 89° 39′ E. It consists of a group of villages with a population (1901) of 4,573. Rājbāri is a station on the Eastern Bengal State Railway, and contains the usual public offices, the sub-jail having accommodation for 22 prisoners.

Boundaries, configuration, and river system.

Backergunge (*Bākarganj*, 'Mart of Aghā Bākar').—Southernmost District of the Dacca Division, Eastern Bengal and Assam, lying between 21° 49′ and 23° 5′ N. and 89° 52′ and 91° 2′ E., with an area of 4,542 square miles. It is bounded on the north by Farīdpur; on the east by the Meghnā and Shāhbāzpur rivers, which separate it from Noākhāli; on the south by the Bay of Bengal; and on the west by the Baleswar river and its estuary the Haringhāta, which divide it from Khulnā.

Backergunge is a typical part of the alluvial delta formed by the three great river systems of Eastern Bengal. The District consists partly of mainland and partly of islands in the estuary of the Meghnā, the largest being DAKHIN SHĀHBĀZPUR, and forms an unbroken plain intersected by a network of sluggish and muddy tidal rivers and channels, with a slight decline from the east towards the west and north-west. Along the coast-line of the Bay lie the SUNDARBANS, a group of half-reclaimed islands separated by tidal creeks, which cover an area in this District of 897 square miles. The MEGHNĀ estuary, here some 8 miles in breadth, sweeps past the east of the District, and is divided by the Dakhin Shāhbāzpur island into an eastern branch called the Shāhbāzpur, and a western known as the Tetuliā river. The Ariāl Khān is a branch of the Ganges; it crosses the north-east corner of the District, and joins the Meghnā through the Māshkāta

and Kalingā channels. The river system consists of offshoots from the Meghnā estuary and the tributaries and distributaries of the Ariāl Khān and Baleswar (as the MADHUMATĪ is called in its lower reaches), which ramify into channels intersecting the District in every direction. A perplexing multiplicity of names extends even to the smaller watercourses, which are often known by different names to villagers living on opposite banks, while the Meghnā estuary itself is known in different parts of its course as the Sātbāria, the Ilsa, the Tetuliā, and the Shāhbāzpur. Most of the rivers and water-channels are navigable throughout the year and are subject to tidal action, which however is powerless during the freshes of the rainy season to arrest the seaward flow of the immense volume of rain-water pouring down the big rivers. Alluvion and diluvion are constantly taking place, especially towards the east, where the District is washed by the Meghnā. On the north and east of the island of Dakhin Shāhbāzpur, the land is being rapidly cut away, while on its western shore a corresponding formation is taking place and large alluvial accretions are being thrown up in the estuary, the names of which indicate their recent origin. There is a very strong bore at spring-tides in the estuary of the Meghnā, and at that season boatmen seldom venture on the river.

The District lies low and, except in the east, most of the country is inundated during the rains. There are extensive depressions in the north and north-west, where the water remains all the year round, the principal being the Sātlā, Dalbairā, Jhanjhaniā, Rāmpur Chechri, Adampur, and Kālārāja *bīls* or swamps.

Geology. The District is covered by recent alluvium, consisting of sandy clay and sand along the course of the rivers and fine silt consolidating into clay in other parts of the river plain, while in the marshes beds of impure peat commonly occur.

Botany. During the rainy season, only the river banks and the artificial mounds on which habitations are situated escape inundation. Where not occupied by gardens, these patches of high ground are densely covered with a scrub jungle of semi-spontaneous species, from which rise bamboos, areca and coco-nut palms, with a few taller trees, among which the commonest is *Odina Wodier* and the most conspicuous the red cotton-tree (*Bombax malabaricum*). The surface of the marshes either shows huge stretches of inundated rice or is covered by matted floating islets of sedges and grasses and various water-lilies, the most striking of these being the *makana* (*Euryale ferox*).

Backergunge contains no Government forests, but the Sundarbans in the south produce many kinds of timber and an abundant supply of firewood. The chief trees are the *sundri* (*Heritiera littoralis*), *haritakī* (*Terminalia Chebula*), *gāb* (*Diospyros embryopteris*), *keorā* (*Sonneratia apetaea*), *kripa* (*Lumnitzera racemosa*), *garān* (*Ceriops Roxburghianus*), *gamhār* (*Gmelina arborea*), and *karanj* (*Galedupa indica*).

Fauna. Tigers, leopards, deer, buffaloes, and wild hog abound in the Sundarbans, and crocodiles swarm in the rivers and are very destructive. Nearly 300 persons are killed annually by wild beasts and snakes.

Temperature and rainfall. Backergunge is remarkable for its uniform temperature and for the high humidity prevailing from April to October; the mean temperature remains almost stationary between 83° and 85° from April to September, but falls in the cold season to 67°. The annual rainfall averages 83 inches, of which 8·1 inches fall in May, 16·3 in June, 18·7 in July, 15·3 in August, 10·6 in September, and 5·9 in October.

Cyclones. Backergunge is peculiarly liable to cyclones accompanied by storm-waves. The most disastrous in recent times were those of 1822 and 1876. In the former, 40,000 human beings and 100,000 cattle perished, and the Collectorate records were swept away. In the latter, Dakhin Shāhbāzpur and some *thānas* of the Patuākhāli subdivision were submerged to a depth of from 10 to 45 feet, and 124,000 persons were drowned or died in the cholera epidemic which ensued; there was also an enormous mortality among the cattle.

History. In prehistoric times Backergunge appears to have formed part of the old kingdom of Banga or Samatata. Its people, who are described in the Raghubansa as living in boats, were clearly the ancestors of the Namasūdras or Chandāls, who are still numerous in the north-west of the District. Authentic history dates only from the fifteenth or sixteenth century. *Pargana* Chandradwīp, or Bākla, was long the seat of a line of Hindu *zamīndārs*, belonging to the group of chiefs known as the Bāra Bhuiyās, who were poetically known as 'the twelve suns of Bengal.' These *zamīndārs* first ruled in Kachuā and subsequently in Mādhabpāsa, where the Durgā Sāgar, a large tank still in existence, is associated with them. One of the scions of their family married a daughter of the famous Rājā Pratāpāditya of Jessore. When or how Musalmāns first came into the District in any numbers is uncertain, but relics of their early settlements exist in the ruins of mosques at Bībī Chini and Kasbā. During the seventeenth and eighteenth

centuries the Arakanese (locally known as Maghs) made regular raids in fleets of armed vessels up the rivers of Eastern Bengal; and as late as 1770, when Major Rennell surveyed the District, he described the southern half of it as a wilderness devastated by the Maghs. In order to defend the country against these incursions, the Mughal governor of Bengal in 1608 transferred his capital to Dacca; and his successor prince Shujā, the brother of Aurangzeb, built a fort (since completely washed away by the Nalchitī river) at Shujābād, 5 miles south-west of Barisāl. Early in the eighteenth century, *pargana* Buzurgumedpur came into the hands of Aghā Bākar, a servant of the Nawāb of Murshidābād, who has given his name to the village and District of Backergunge. After Aghā Bākar's death, Rājā Rāj Ballabh of Rājnagar, one of the most famous men of his time, got possession of the property; and it was he who first invited Portuguese Christians from Bāndal and Goa in order to coerce his refractory tenants, and settled them in the Sibpur *tāluk*, where their descendants, known as Firinghīs, still reside.

British rule in the District dates from the Company's accession to the Dīwāni in 1765. Until 1817 the District formed part of the Dacca Collectorate, but was administered by a Judge and Magistrate of its own, who was stationed at the town of Backergunge near the junction of the Krishnakāti and Khairābād rivers. In 1801 the administrative head-quarters were transferred to Barisāl. Numerous changes of jurisdiction have since occurred, the most important being the transfer of the island of Dakhin Shāhbāzpur from Noākhāli to Backergunge in 1859, and that of the greater part of the Mādārīpur subdivision from this District to Farīdpur in 1874.

The people.

The population of Backergunge increased from 1,887,586 in 1872 to 1,900,889 in 1881, 2,153,965 in 1891, and 2,291,752 in 1901. Progress was checked between 1872 and 1881 by the disastrous cyclone of 1876. During the decade ending 1901 the greatest increase of population took place in the swampy *thānas* in the north (Gaurnadī 14·8 per cent. and Swarupkāti 13·7), where reclamation is steadily going on as fresh deposits of silt gradually replace water by mud. Two of the three Sundarban *thānas*, Amtalī and Galāchipā, in which cultivation is rapidly extending, also showed large increases. The climate is not unhealthy, except after the close of the rains, when fever is prevalent. The chief statistics of the Census of 1901, according to subdivisions, are shown in the following table:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Barisāl	1,110	3	2,048	945,367	852	+ 7·5	92,778
Pirojpur	692	1	1,066	553,494	800	+ 6·5	55,902
Patuākhāli	1,231	1	1,051	522,658	425	+ 5·2	21,794
Dakhin Shāhbāzpur	612	...	447	270,233	442	+ 4·6	12,319
District total	4,542*	5	4,612	2,291,752	505	+ 6·4	182,793

* Includes 897 square miles comprised in the Sundarbans, which are not included in the subdivisional figures.

The District contains a large but sparsely inhabited tract in the Sundarbans. If this be excluded, the density of population rises from 505 to 629 per square mile; it is greatest in the Pirojpur and Jhālakāti *thānas*, where there are respectively 1,128 and 1,193 inhabitants per square mile. The principal towns are BARISĀL, the head-quarters, PIROJPUR, JHĀLAKĀTI, and PATUĀKHĀLI. A great influx of labourers takes place at the winter rice harvest from Farīdpur, Dacca, and Noākhāli. The language of the District is the dialect of Bengali known as Musalmānī. In 1901 Musalmāns numbered 1,565,024, or more than 68 per cent. of the total, and Hindus 713,800; among the remainder there were 7,220 Buddhists and 5,591 Christians.

Castes and occupations.

Of the Musalmāns more than $1\frac{1}{2}$ millions call themselves Shaikhs, and are doubtless in the main derived from the aboriginal race represented at the present day by the Hindu Namasūdras, who number 318,000 and live an almost amphibious life in the swamps in the north-west of the District. After the Namasūdras, Kāyasths (78,000), Brāhmans (52,000), Nāpits and Sūdras (each with 36,000), and Kaibarttas (26,000) are the most numerous Hindu castes. The Buddhists are Maghs who have resided in this part of the Sundarbans for more than a century; they adhere to their own mode of living, intermarry strictly among themselves, and build their dwellings on piles on the model of Burmese houses. Of the total population, no less than 81 per cent. are dependent on agriculture; industries support 9·6 per cent., commerce 0·5 per cent., and the professions 2·3 per cent.

Christian missions.

Missions of various denominations are active; the number of native Christians has nearly doubled since 1881 and now exceeds 5,000. They are mainly recruited from the ranks

of the despised Namasūdras. The Portuguese colony at Sibpur has already been mentioned; a Roman Catholic mission was established at this place 200 years ago under the patronage of the King of Portugal, and there is another more recent mission subordinate to the Bishop of Dacca. The Baptist Mission has some 3,000 converts; and connected with it is a Zanāna mission, which maintains a large boarding-school for girls at Barisāl. The Bengal Evangelistic Mission, whose head-quarters are at Farīdpur, and the Oxford Mission have branches in the District; and a sisterhood is engaged in medical, educational, and proselytizing work among native women in Barisāl.

General agricultural conditions.

The higher ground in the east produces sugar-cane, pulses, the *pān* creeper (*Piper Betle*), and a little jute; the rest of the District is fertilized by rich deposits of silt and forms with Noākhāli the most important rice-producing tract in Eastern Bengal.

Chief agricultural statistics and principal crops.

The chief agricultural statistics for 1903–4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Barisāl	1,110	701	39
Pirojpur	692	547	70
Patuākhāli	1,231	547	102
Dakhin Shāhbāzpur	612	418	23
Total	4,542 *	2,213	234

* Includes 897 square miles in the Sundarbans.

Rice is grown over an area of 2,205 square miles, or 83 per cent. of the total cultivated area. The winter rice, which covers 78 per cent. of the net cropped area, is sown in April or May, transplanted from the beginning of June to the middle of August, and reaped in November and December. The early rice crop is sown in spring and the early part of the hot season, and reaped in August; in some parts it is transplanted, but in the north it is sown broadcast. The spring crop, although not equal in importance to the others, is cultivated to a considerable extent on the alluvial accretions along the river banks and in the swamps. It is generally sown broadcast in December and reaped in April or May; it is sometimes transplanted. Pulses are sown in the cold season and harvested in the spring. *Til* (*Sesamum indicum*) and linseed are also cultivated, the latter chiefly in the Dakhin Shāhbāzpur subdivision. There is very little jute, but betel-nut and coco-nut

palms are grown extensively all over the District; and it is estimated that the number of betel-nut trees is altogether about 27 millions, and that the annual out-turn is 6,000 million nuts.

Improvements in agricultural practice. The area under cultivation is spreading rapidly as the swamps silt up in the north and the jungle is reclaimed in the south. The area not available for cultivation is returned at 1,121 square miles; it lies mainly in the Sundarbans, and much of it is covered with the water of the great estuaries. In Wards' and Government estates European vegetables and improved varieties of native crops have been introduced to a small extent. Owing to the fertility of the soil and the general prosperity of the cultivators, there is little need for Government loans; but Rs. 17,000 was advanced under the Agriculturists' Loans Act after the cyclone of 1893.

Cattle. The District cattle are poor. Attempts have been made by Government and public bodies to improve them by importing bulls from Bihār, but without success.

Arts and manufactures. Backergunge is not a manufacturing District; but oil, coarse cloth, mosquito nets, gunny-bags, sacrificial knives and other iron instruments, mats of various kinds, earthenware, agricultural implements, and molasses are manufactured for local consumption. The weavers of Wazīrpur and Bānaripāra make *dhotīs* of the Dacca pattern; the mosquito nets manufactured at Mādhabpāsa command a large sale among the middle classes, and the Maghs weave coloured cloth for their own use. Machine-made cloth is gradually driving the local weavers from their looms, and the rapidly growing taste for European pottery and enamelled ironware is depriving the local potters of their best customers. Wazīrpur and its neighbourhood has a local reputation for *daos* and other iron implements, and boats are built throughout the District. Brick-making is carried on to a considerable extent in the neighbourhood of Barisāl, and a large oil-mill at Jhālakāti has an annual out-turn valued at Rs. 25,000.

Commerce. Rice is exported to the Twenty-four Parganas, Dacca, and Mymensingh, and 2,000,000 tons of rice find their way annually to the Calcutta market; other articles exported are betel-nuts and coco-nuts to Calcutta, Dacca, Noākhāli, and Chittagong, and timber and mats to Calcutta. The betel-nut crop is especially large and profitable; and it is estimated that the trees in the District bring in annually nearly 44 lakhs to the growers. Most of the crop is sent to Calcutta, but some portion of it is also prepared for the Burmese market.

The principal imports are salt, kerosene oil, coal, European piece-goods, cotton twist, molasses, sugar, corrugated iron, oil, tobacco, and flour. The chief trade centres are JHĀLAKĀTI and NALCHITĪ on the main steamer route to Calcutta, DAULATKHĀN, and Sāhibganj; rice is also exported from Bagā, Bauphal, Niāmati, Bhandāria, Kaukhāli, Kālaia, Chaulākāti, Charāmaddī, and Bhuriā. Large annual fairs are held at Kālīsuri, Kalaskāti, and Lākutia. The traders belong chiefly to the Gandhabanik, Sāhā, Teli, and Pātikar castes. Goods are carried by both country boats and steamers, the main trade route being through the Sundarbans to Calcutta.

Roads. There is no railway in the District, and the roads are little used for goods traffic except in the Dakhin Shāhbāzpur subdivision. Wherever constructed, they are largely used by foot-passengers, especially on market days. Excluding 487 miles of village tracks, the District contains only 307 miles of roads, of which 17 miles are metalled. The most important road runs from the northern boundary via Barisāl and Bāckergunge to Patuākhāli. Barisāl is also connected on the west with Bānaripāra and Nabagrām, and on the south-west with Nalchitī and Jhālakāti, while another main road runs from Pirojpur to Sāpleja, via Tushkhāli, along the west of the District. A good road traverses the island of Dakhin Shāhbāzpur.

Water communications. The drains along the side of many of the roads are used as waterways; and throughout the greater part of the District there are few villages which cannot be reached by boat, especially during the rains. In Dakhin Shāhbāzpur, however, few villages are accessible by boats, except in the rainy season. Regular lines of steamer ply along the larger rivers, the most important being the daily Sundarbans dispatch service from Cāchār to Calcutta, via Nārāyanganj, Chāndpur, Barisāl, Nalchitī, and Jhālakāti, and another which carries the mails between Barisāl and Khulnā. Daily services connect Barisāl with Nārāyanganj, Mādārīpur, and Patuākhāli. A steamer runs to Noākhāli four times a week. There are numerous ferries across the principal rivers and to the islands.

District subdivisions and staff. For general administrative purposes the District is distributed into four subdivisions, with head-quarters at BARISĀL, PIROJPUR, PATUĀKHĀLI, and DAKHIN SHĀHBĀZPUR. At Barisāl is stationed the District Magistrate-Collector, who is also *ex-officio* collector of tolls and supervisor of the additional navigable channels under (Bengal) Act V of 1864. He is assisted by a staff of one Joint-Magistrate or Assistant Collector and five Deputy-Magistrate-Collectors. Each of the other

subdivisions is under a Deputy-Magistrate-Collector, and a Sub-Deputy-Collector is in charge of the sub-treasury at Pirojpur. There are also three *kānungos*, and a special Deputy-Magistrate-Collector in charge of the Government estates.

Civil and criminal justice.

The civil courts, besides that of the District and Sessions Judge, are those of an additional District and Sessions Judge, of two Sub-Judges, and of sixteen regular Munsifs, of whom six are stationed at Barisāl, two at Bholā, three at Pirojpur, four at Patuākhāli, and one wherever the pressure of work may be greatest. Criminal courts include those of the District and Sessions Judge, the District Magistrate, and the above-mentioned Deputy-Magistrates. The practice of sub-infeudation has brought into existence a large body of middlemen between the revenue-payer and the actual cultivators, who are continually fomenting land disputes, and the District is notorious for agrarian riots. These were so frequently attended by gunshot murders that Backergunge was disarmed in 1896, a measure which was attended with remarkable success. The order was relaxed in 1904, and gun licences are now granted to persons of position and good character. Many crimes of violence also arise out of marriage disputes, which are rife among the lower class of Muhammadans.

Land revenue.

In the first settlement of Bengal, made in 1582 by Rājā Todar Mal, Backergunge was included in *sarkār* Bākla; but at the subsequent settlements, made by the Muhammadan rulers, it was comprised in the province of Dacca. It was constituted a separate District in 1797 by Regulation VII of that year, but it was not till 1817 that an independent Collector was first appointed. In 1903–4 the current land revenue demand was 16·94 lakhs, payable by 3,634 estates, of which 3,019 with a demand of 10·05 lakhs were permanently settled, 278 paying 2·65 lakhs were temporarily settled, and the others were managed direct by Government. At the time of the Permanent Settlement there were extensive areas of waste land which remained unsettled. These have since been largely brought under cultivation and now form valuable Government estates. Owing to this circumstance, the incidence of revenue is Rs. 1–2–6 per cultivated area, as compared with only R. 0–8–18 in Farīdpur and R. 0–6–11 in Dacca.

Sub-infeudation is carried to extreme lengths, and there are said to be as many tenures as there are *ryoti* holdings. The system was originated by *zamīndārs* and *talukdārs*, who, finding themselves unable to clear the large tracts of unre-

claimed land included in their properties, divided them into lots and placed each lot in the *haolā* or charge of an individual; the *haolādār* repeated the process to sub-lessees, who in their turn sublet portions of their tenures, until these became of manageable size. This system of reclamation tenures is universal in the half-cleared tracts of Eastern Bengal, but in Backergunge it has been overlaid by a bewildering maze of more or less fictitious tenures, which owe their origin to land-jobbing. The grant of a tenure of any description commands a heavy *salāmi* or premium; and a landlord's favourite method of raising money is to create an intermediate tenure between himself and the ryot or tenure-holder immediately subordinate to him, at a rent slightly lower than he has been receiving, the premium paid to him being equivalent to the capitalized value of the reduction in rent. The new lessee makes a profit by squeezing an extra cess out of the man below him; and the result is that an undue share of the produce of the soil goes to feed an army of middlemen who have no rightful place in the rural economy. This process is being constantly repeated by all grades of tenure-holders; and there seems to be no limit to its development, save the capacity of the actual cultivator to bear the increased burden falling upon him. In spite of this, however, the system tends to diffuse wealth widely among the people: many of the tenure-holders are men of the cultivating class and cultivate some portion of their tenures themselves; they generally hold these tenures at fixed rates, the rents are moderate, and, as a class, they are very prosperous. The ryot again is only rack-rented where the tenure immediately above him is held by a strong and unscrupulous man, and such rack-renting is confined to certain localities in which the lowest grade of tenure is in the hands of a bad class of landlord. When the ryot finds his rent enhanced more than he can bear, or if he is influenced by attractive promises held out by an outsider, he will deny his relationship as tenant to his real landlord, and will place himself under the protection, or *zimba*, of the outsider, acknowledging the latter as his landlord. This, with the infinitesimal division of shares, where no actual partition of the land can take place, has led to the agrarian riots and murders for which Backergunge is notorious. To obviate these disputes, a general survey and record-of-rights is now being carried out throughout the District. The latest survey papers show that the rent per acre paid by the actual cultivator to his immediate landlord for arable land varies from Rs. 2 to

Rs. 10 per acre, the average being Rs. 5. High land suitable for homesteads commands a still higher rate.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	14,63	15,64	16,41	16,95
Total revenue . .	23,09	26,29	30,81	31,79

Local and municipal government.

Outside the five municipalities of BARISĀL, NALCHITĪ, JHĀLAKĀTI, PATUĀKHĀLI, and PIROJPUR, local affairs are managed by the District board, with subordinate local boards for each subdivision. In 1903-4 its income was Rs. 3,32,000, of which Rs. 2,26,000 was derived from rates; and the expenditure was Rs. 3,21,000, including Rs. 1,96,000 spent on public works and Rs. 61,000 on education.

Police and jails.

The District contains 16 police stations or *thānas*, and 11 outposts. The force subordinate to the District Superintendent in 1903 consisted of one Assistant District Superintendent, 8 inspectors, 66 sub-inspectors, 38 head constables, and 541 constables; 76 town *chaukīdārs* are employed for watch and ward duty in the five municipal towns, and there is also a rural police force consisting of 5,293 village watchmen and 508 head watchmen. The District jail at Barisāl has accommodation for 580 prisoners, and the subsidiary jails in the other subdivisions for 99.

Education.

Education is widely diffused, and in 1901, 7·9 per cent. of the population (14·7 males and 0·9 females) could read and write. Musalmāns are more backward than Hindus, only 10 per cent. of their males being literate, compared with 24 per cent. in the case of Hindus. The total number of pupils under instruction rose from 75,859 in 1892-3 to 86,456 in 1900-1; and 81,554 boys and 7,189 girls were at school in 1903-4, being respectively 46·2 and 4·2 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 3,074, including an Arts college, 98 secondary schools, and 2,497 primary schools. The expenditure on education was 3·51 lakhs, of which Rs. 27,000 was met from Provincial funds, Rs. 61,000 from District funds, Rs. 1,500 from municipal funds, and 1·88 lakhs from fees. The chief educational institutions are at Barisāl.

In 1903 the District contained 41 dispensaries, of which 5 had accommodation for 68 in-patients. Altogether, the cases of 331,000 out-patients and 1,060 in-patients were treated during the year, and 8,913 operations were performed. The expenditure was Rs. 34,000, of which Rs. 2,000 was met from Government contributions, Rs. 21,000 from Local and Rs. 4,000 from municipal funds, and Rs. 6,000 from subscriptions. Medical.

Though vaccination is compulsory only within the five municipalities, it has made great progress in recent years, the number of successful vaccinations in 1903–4 being 122,000, or 54·2 per 1,000 of the population. Vaccination.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. v, and Geographical Notes appended to vol. i (1875); H. Beveridge, *Backergunge* (1876); P. M. Basu, *Settlement Reports of the Dakhin Shāhbāzpur and Tushkhāli Government Estates* (Calcutta, 1896 and 1898).]

Barisāl Subdivision. — Head-quarters subdivision of Backergunge District, Eastern Bengal and Assam, situated at its north-east corner, between 22° 28′ and 23° 5′ N. and 90° 1′ and 90° 41′ E., with an area of 1,110 square miles. The population in 1901 was 945,367, compared with 879,177 in 1891. It contains three towns, BARISĀL (population, 18,978), the head-quarters, and the important marts of JHĀLAKĀTI (5,234) and NALCHITĪ (2,240); and 2,048 villages. It is the most densely populated subdivision in the District, with a density of 852 persons per square mile. It is a deltaic tract, intersected by numerous rivers and water-channels. The level sinks to the north-west, and parts of this portion are covered with deep morasses.

Pirojpur Subdivision.—Western subdivision of Backergunge District, Eastern Bengal and Assam, lying between 22° 1′ and 22° 54′ N. and 89° 52′ and 90° 14′ E., with an area of 692 square miles. The population in 1901 was 553,494, compared with 519,603 in 1891. It contains one town, PIROJPUR (population, 14,119), the head-quarters, and 1,066 villages, and supports 800 persons per square mile, the density being greatest in the north and centre. In the extreme north it is covered with great swamps like the adjoining parts of Farīdpur District, while in the south in the Matbāri *thāna*, where the density is only 480 persons per square mile, it merges in the SUNDARBANS.

Patuākhāli Subdivision.—South-eastern subdivision of Backergunge District, Eastern Bengal and Assam, lying

between 21° 49′ and 22° 36′ N. and 89° 59′ and 90° 40′ E., with an area of 1,231 square miles. The subdivision is a fertile deltaic tract, merging to the south in the SUNDARBANS, where there are extensive areas of waste land covered with forest. The population in 1901 was 522,658, compared with 496,735 in 1891. It contains one town, PATUĀKHĀLI (population, 5,003), the head-quarters, and 1,051 villages, and is the most sparsely populated subdivision in the District, supporting only 425 persons per square mile, the density being lowest towards the south where the Sundarbans have been only partially reclaimed.

Dakhin Shāhbazpur.—Large island in the Meghnā estuary, forming a subdivision of Backergunge District, Eastern Bengal and Assam, lying between 22° 6′ and 23° 2′ N. and 90° 35′ and 91° 2′ E., with an area of 612 square miles. The population in 1901 was 270,233, compared with 258,450 in 1891, the density being 442 persons per square mile. It contains 447 villages, at one of which, BHOLĀ, the head-quarters are now situated. The island is formed of the silt brought down by the Meghnā, whose strong bore at spring-tides impinges on its east face, flooding all the watercourses and creeks. To the north and east, land is being cut away by the river, many homesteads with their palm groves annually disappearing, while elsewhere, especially towards the west, large alluvial accretions are continually forming. The island is peculiarly liable to the ravages of storm-waves and cyclones, and was devastated by the cyclone of 1876 (*see* BACKERGUNGE DISTRICT), which swept away almost the entire population of DAULATKHĀN, the former head-quarters.

Boundaries and physical aspects.

Sundarbans.—A vast tract of forest and swamp, extending for about 170 miles along the sea face of the Bay of Bengal from the estuary of the Hooghly to that of the Meghnā, and running inland to a distance of from 60 to 80 miles. The most probable meaning of the name is the 'forest of *sundri*' (*Heritiera littoralis*), this being the characteristic tree found here. The tract lies between 21° 31′ and 22° 38′ N. and 88° 5′ and 90° 28′ E., with an area of 6,526 square miles, of which 2,941 are included in the District of the Twenty-four Parganas, 2,688 in Khulnā, and 897 in BACKERGUNGE.

The Sundarbans forms the lower part of the Ganges delta, and is intersected from north to south by the estuaries of that river, the most important, proceeding from west to east, being the Hooghly, Mātla, Raimangal, Mālanchā,

Haringhāta, Rabnābād, and MEGHNĀ. The tract through which they flow is one vast alluvial plain, where the process of land-making has not yet ceased and where morasses and swamps, now gradually filling up, abound. The rivers are connected with each other by an intricate series of branches, and the latter in their turn by innumerable smaller channels; so that the whole tract is a tangled network of streams, rivers, and watercourses, enclosing a large number of islands of various shapes and sizes. Cultivation is confined to a fringe of reclaimed land situated along the northern boundary, except in Backergunge, where some of the clearings extend almost down to the sea.

Botany. The flat swampy islands are covered with dense forest, the most plentiful and important species being the *sundri*, which thrives most where the water in the channels is least brackish. Towards the north the forests contain a rather dense undergrowth, but elsewhere this is very scanty. In the north some mangroves, chiefly *Kandelia* and *Bruguiera*, are found scattered along the river banks; farther south, as the influence of the tide increases, they become more numerous, *Ceriops* and *Rhizophora* now appearing with the others, till at length the riparian vegetation is altogether mangrove. By this time too, *sundri* and its associates largely disappear from the interior forests, which are now mainly composed of *geoā* (*Excoecaria Agallocha*). Nearer the sea this in turn gives way to mangroves. This pure mangrove forest sometimes extends into the tide; but at other times it is separated from the waves along the sea face by a line of low sand-dunes, on which reappear some of the swamp forest species, accompanied by a few plants characteristic of other Asiatic shores, such as *Erythrina indica*, *Thespesia populnea*, *Ficus Rumphii*, and others for which the conditions in the swampy islands of the interior seem to be unsuited.

Fauna. The wild animals include tigers, which cause much destruction, rhinoceros (now nearly extinct), buffalo, hog, spotted deer (*Cervus axis*), barking-deer (*Cervulus muntjac*), and hog deer (*Cervus porcinus*). The rivers are infested with crocodiles, which are dangerous to man and beast; and the cobra, python, and many other varieties of snakes are found. In the cold season, geese, ducks, and other birds congregate in large numbers on the sandbanks.

Rainfall and cyclones. The average annual rainfall varies from about 82 inches in the west to over 200 inches in the east. Cyclones and storm-waves occur from time to time. The worst of the

recent calamities of this nature was in 1870, when a great part of Backergunge and the adjoining Districts was submerged, the depth of water in some places being over 10 feet. An account of this catastrophe is given in the article on BACKERGUNGE DISTRICT.

History. Nothing is known of the Sundarbans until about the middle of the fifteenth century, when a Muhammadan adventurer, named Khān Jahān, or Khānja Alī, obtained a *jāgīr* from the king of Gaur, and made extensive clearances near Bāgherhāt in Khulnā; he appears to have exercised all the rights of sovereignty until his death in 1459. A hundred years later, when Daud, the last king of Bengal, rebelled against the emperor of Delhi, one of his Hindu counsellors obtained a Rāj in the Sundarbans, the capital of which, Iswarīpur, near the Kālīganj police station in Khulnā, was called Yasohara and has given its name to the modern District of Jessore. His son, Pratāpāditya, was one of the twelve chiefs or Bhuiyās who held the south and east of Bengal, nominally as vassals of the emperor, but who were practically independent and frequently at war with each other. He rebelled but, after some minor successes, was defeated and taken prisoner by Rājā Mān Singh, the leader of Akbar's armies in Bengal from 1589 to 1606.

It is believed that at one time the Sundarbans was far more extensively inhabited and cultivated than at present; and possibly this may have been due to the fact that the shifting of the main stream of the Ganges from the Bhāgīrathi to the Padmā, by diminishing the supply of fresh water from the north, rendered the tract less fit for human habitation. Another cause of the depopulation of this tract may be found in the predatory incursions of Magh pirates and Portuguese buccaneers in the early part of the eighteenth century. It is said that in 1737 the people then inhabiting the Sundarbans deserted it in consequence of the devastated state of the country, and in Rennell's map of Lower Bengal (1772) the Backergunge Sundarbans is shown as 'depopulated by the Maghs.' The most important remains are the tomb of Khān Jahān and the ruins of Shāt Gumbaz and Iswarīpur in the Bāgherhāt subdivision of Khulnā District, the temple of Jhatar Dad in the Twenty-four Parganas, and the Navaratna temple near Kālīganj police station in Khulnā.

The people. The majority of the present inhabitants have come from the Districts immediately to the north of the Sundarbans,

and consist chiefly of low-caste Hindus and Muhammadans, the Pods being the most numerous Hindu caste in the west and the Namasūdras or Chandāls towards the east. The Muhammadans, who are numerous in the east, belong mostly to the fanatical sect of Farāzis. In the Backergunge Sundarbans there are some 7,000 Maghs, who came originally from the Arakan coast. Between the months of October and May crowds of wood-cutters from Backergunge, Khulnā, Farīdpur, Calcutta, and elsewhere come in boats and enter the forests for the purpose of cutting jungle. The coolies whom they employ to do jungle-clearing, earthwork, &c., come from Hazāribāgh, Bīrbhūm, Mānbhūm, Bānkurā, and Orissa. There are no villages or towns, and the cultivators live scattered in little hamlets. Port Canning was at one time a municipality, but is now nearly deserted; Morrelganj in Khulnā District is an important trading centre.

The reclaimed tract to the north is entirely devoted to rice cultivation, and winter rice of a fine quality is grown there; sugar-cane and areca-palms are also cultivated in the tracts lying in Khulnā and Backergunge Districts. When land is cleared, a *bāndh* or dike is erected round it to keep out the salt water, and after two years the land becomes fit for cultivation; in normal years excellent crops are obtained, the out-turn being usually about 20 maunds of rice per acre. Agriculture.

The Sundarbans contains 2,081 square miles of 'reserved' forests in Khulnā District, and 1,758 square miles of 'protected' forests in the Twenty-four Parganas. These are under the charge of a Deputy-Conservator of Forests, aided by two assistants, whose head-quarters are at Khulnā. The characteristics of the forests have been described above. They yield an immense quantity of timber, firewood, and thatching materials, the minor produce consisting of *golpāta* (*Nipa fruticans*), *hantāl* (*Phoenix paludosa*), *nal*, honey, wax, and shells, which are burned for lime. The 'protected' forests in the Twenty-four Parganas are gradually being thrown open for cultivation, and 466 square miles were disforested between the years 1895 and 1903. The gross receipts from the Sundarbans forests in 1903-4 were 3·83 lakhs, and the net revenue 2·71 lakhs. Forests.

At Kālīganj, in Khulnā District, country knives, buffalo-horn combs, and black clay pottery are made.

Rice, betel-nuts, and timber are exported to Calcutta.

Communications.

Port Canning on the Mātla river is connected with Calcutta by rail; but, apart from this, the only means of communication are afforded by the maze of tidal creeks and cross-channels by which the Sundarbans is traversed. These have been connected with one another and with Calcutta by a system of artificial canals (described under the CALCUTTA AND EASTERN CANALS), which enable Calcutta to tap the trade of the Ganges and Brahmaputra valleys. Regular lines of steamers for passengers and cargo use this route, while the smaller waterways give country boats of all sizes access to almost every part of the tract. Fraserganj at the mouth of the Hooghly river has recently been selected as the site of a permanent wireless telegraphy station, the object of which is to establish communication with vessels in the Bay of Bengal.

Administration.

The tracts comprised in the Sundarbans form an integral part of the Districts in which they are included. The revenue work (except its collection) was formerly in the hands of a special officer called the Commissioner in the Sundarbans, who exercised concurrent jurisdiction with the District Collectors; but this appointment has recently been abolished, and the entire revenue administration has been transferred to the Collectors concerned.

Land revenue.

The earliest known attempt to bring the Sundarbans under cultivation was that of Khān Jahān. More recent attempts date from 1782, when Mr. Henckell, the first English Judge and Magistrate of Jessore, inaugurated the system of reclamation between Calcutta and the eastern Districts. Henckellganj, named after its founder by his native agent, appears as Hingulganj on the survey maps. This area was then a dense forest, and Mr. Henckell's first step was to clear the jungle; that done, the lands immediately around the clearances were gradually brought under cultivation. In 1784, when some little experience had been gained, Mr. Henckell submitted a scheme for the reclamation of the Sundarbans, which met with the approval of the Board of Revenue. Two objects were aimed at: to gain a revenue from lands then utterly unproductive, and to obtain a reserve of rice against seasons of drought, the crops in the Sundarbans being very little dependent upon rainfall. The principal measure adopted was to make grants of jungle land on favourable terms to people undertaking to cultivate them. In 1787 Mr. Henckell was appointed Superintendent of the

operations for encouraging the reclamation of the Sundarbans, and already at that time 7,000 acres were under cultivation. In the following year, however, disputes arose with the *zamīndārs* who possessed lands adjoining the Sundarbans grants; and as the *zamīndārs* not only claimed a right to lands cultivated by the holders of these grants, but enforced their claims, the number of settlers began to fall off rapidly. Mr. Henckell expressed a conviction that, if the boundaries of the lands held by the neighbouring *zamīndārs* were settled, the number of grants would at once increase; but the Board of Revenue had grown lukewarm about the whole scheme, and in 1790 it was practically abandoned. Several of the old grants forthwith relapsed into jungle.

In 1807, however, applications for grants began to come in again; and in 1816 the post of Commissioner in the Sundarbans was created by Regulation IX of that year, in order to provide an agency for ascertaining how far neighbouring landholders had encroached beyond their permanently-settled estates, and for resuming and settling such encroachments. From that time steady progress was made until, in 1872, the total area under cultivation was estimated at 1,087 square miles, of which two-thirds had been reclaimed between 1830 and 1872. The damage done by the disastrous cyclone of 1870 led to the abandonment of many of the more exposed holdings, and in 1882 the total reclaimed area was returned at only 786 square miles. Since then rapid progress has again been made, and in 1904 the total settled area had risen to 2,015 square miles.

Settlements of waste lands have, until recently, been formed under the rules promulgated in 1879, the grants made being of two classes: namely, blocks of 200 acres or more leased for forty years to large capitalists who are prepared to spend time and money in developing them; and plots not exceeding 200 acres leased to small capitalists for clearance by cultivators. Under these rules one-fourth of the entire area leased was for ever exempted from assessment, while the remaining three-fourths was held free of assessment for ten years. On the expiry of the term of the original lease, the lot was open to resettlement for a period of thirty years. It was stipulated that one-eighth of the entire grant must be rendered fit for cultivation at the end of the fifth year, and this condi-

tion was enforced either by forfeiture of the grant or by the issue of a fresh lease at enhanced rates. Almost the whole of the area available for settlement in Khulnā has already been leased to capitalists; in Backergunge 479 out of 645 square miles have been settled, and in the Twenty-four Parganas 1,223 out of 2,301 square miles. Experience has shown that this system has led to the growth of an undesirable class of land speculators and middlemen, and to the grinding down of the actual cultivators by excessive rents. Land-jobbers and speculators obtained leases for the purpose of reselling them; in order to recoup his initial outlay the original lessee often sublet to smaller lessees in return for cash payments; and the same process was carried on lower down the chain, with the result that the land was eventually reclaimed and cultivated by peasant cultivators paying rack-rents. It was accordingly decided in 1904 to abandon this system and to introduce a system of *ryotwāri* settlement, as an experimental measure, in the portions of the Sundarbans lying in the Districts of Backergunge and the Twenty-four Parganas. Under this system small areas will be let out to actual cultivators, assistance being given them by Government in the form of advances, as well as by constructing tanks and embankments and clearing the jungle for them.

[J. Westland, *Report on Jessore* (Calcutta, 1874); F. E. Pargiter, *Revenue History of the Sunderbans from* 1765 *to* 1870 (Calcutta, 1885).]

Barisāl Town.—Head-quarters of Backergunge District, Eastern Bengal and Assam, situated in 22° 42′ N. and 90° 22′ E., on the west bank of the Barisāl river. Population (1901), 18,978. In the middle of the eighteenth century Barisāl was an important salt *chaukī*, or place where salt tax was paid. The head-quarters of the District, formerly at Backergunge, were transferred here in 1801. The Barisāl river is navigable by steamers all the year round; and daily steamers ply to Khulnā and Nārāyanganj, establishing communication with Calcutta and Dacca respectively, the journey to the former occupying twenty-four hours and to the latter twelve hours. It has also steamer communication with Patuākhāli in this District and Ichākhāli and Bhawānīganj in Noākhāli. Barisāl was constituted a municipality in 1876. The income during the decade ending 1901-2 averaged Rs. 31,000, and the expenditure Rs. 29,000. In 1903-4 the income was Rs. 47,000, of which Rs. 10,000 was derived from a tax on persons (or

property tax), and Rs. 12,000 from a conservancy rate; the income was also augmented by contributions of Rs. 4,000 for medical purposes and Rs. 10,000 for general purposes from Local funds and other sources. The expenditure in the same year was Rs. 35,000. The town has wide, straight, and well-kept streets, the river-side road to Sāgardī being bordered by fine avenues; and it is intersected by numerous creeks, which are flushed twice a day at flood-tide, and add much to the healthiness of the town. There are numerous tanks, of which four, unconnected with the river, are reserved for drinking purposes; a scheme to supply filtered water is under consideration.

In addition to the usual public offices and the jail, the town contains three churches belonging to the Anglican, Roman Catholic, and Baptist denominations, and a public library founded in 1855. The District jail has accommodation for 580 prisoners, who are employed on oil-pressing, brick-pounding, brick-making, carpet- and mat-making, weaving, and bamboo work. A first-grade college teaches up to the B.A. standard. A District school is controlled by a joint committee of the municipality and District board, and two girls' schools are maintained respectively by the Baptist Zanāna Mission and by subscriptions; a technical school is affiliated to the District school. There are five printing presses, and three vernacular newspapers are published in the town.

Bholā.—Head-quarters of the Dakhin Shāhbāzpur subdivision, Backergunge District, Eastern Bengal and Assam, situated in 22° 41′ N. and 90° 40′ E. Bholā consists of portions of three villages, the aggregate population of which in 1901 was 6,263. It contains the usual public offices; the sub-jail has accommodation for 18 prisoners.

Daulatkhān.—Village and former head-quarters of the Dakhin Shāhbāzpur subdivision, Backergunge District, Eastern Bengal and Assam, situated in 22° 38′ N. and 90° 49′ E. Population (1901), 381. The village was destroyed in the storm-wave of 1876, nearly all the inhabitants being drowned, and again suffered severely in the cyclone of 1893; but it is still an important centre of trade, the principal article of export being betel-nuts. Daulatkhān is connected by road with Bholā and Tarnir Hāt, and the service of steamers between Barisāl and Noākhāli calls here four days in the week.

Jhālakāti.—Town in the head-quarters subdivision of Backergunge District, Eastern Bengal and Assam, situated in 22° 39′ N. and 90° 13′ E., at the junction of the Nalchitī

river and the Jhālakāti Khāl. Population (1901), 5,234. Jhālakāti lies on the main steamer route between Barisāl and Calcutta, and is one of the most important markets in Eastern Bengal, the chief exports being rice and betel-nuts, and the imports salt, tobacco, oil, and sugar. A very large quantity of timber, especially *sundri* wood (*Heritiera littoralis*), cut in the Sundarbans, is sold here. There is an oil-mill, with an annual out-turn estimated at Rs. 25,000. Jhālakāti was constituted a municipality in 1875. The income during the decade ending 1901–2 averaged Rs. 5,200, and the expenditure Rs. 5,000. In 1903–4 the income was Rs. 8,800, mainly derived from a property tax and a conservancy rate; and the expenditure was Rs. 8,600.

Nalchitī.—Town in the head-quarters subdivision of Backergunge District, Eastern Bengal and Assam, situated in 22° 39′ N. and 90° 18′ E., on the river of the same name. Population (1901), 2,240. Nalchitī was formerly an important trading town, exporting betel-nuts direct to Arakan and Pegu, and is still a busy mart on the main steamer route between Barisāl and Calcutta. The chief exports are rice and betel-nuts; and the chief imports are salt, tobacco, oil, and sugar. Nalchitī was constituted a municipality in 1875. The income during the decade ending 1901–2 averaged Rs. 2,270, and the expenditure Rs. 2,100. In 1903–4 the income was Rs. 3,150, mainly derived from a property tax; and the expenditure was Rs. 3,100.

Patuākhāli Town.—Head-quarters of the subdivision of the same name in Backergunge District, Eastern Bengal and Assam, situated in 22° 22′ N. and 90° 22′ E., on the Patuākhāli river. Population (1901), 5,003. Patuākhāli was constituted a municipality in 1892. The income and expenditure during the decade ending 1901–2 both averaged Rs. 3,000. In 1903–4 the income was Rs. 5,000, half of which was derived from a property tax; and the expenditure was Rs. 4,000.

Pirojpur Town.—Head-quarters of the subdivision of the same name in Backergunge District, Eastern Bengal and Assam, situated in 22° 35′ N. and 89° 59′ E., on the Baleswar river. Population (1901), 14,119. Pirojpur was constituted a municipality in 1885. The income during the decade ending 1901–2 averaged Rs. 6,300, and the expenditure Rs. 6,200. In 1903–4 the income was Rs. 9,000, of which Rs. 5,000 was derived from a property tax; and the expenditure was Rs. 8,000.

Ponābālia Shāmrail.—Village in the head-quarters sub-

division of Backergunge District, Eastern Bengal and Assam, situated on the bank of the Sundha or Shugandha, 5 miles from Jhālakāti. Population (1901), 498. Rām Bhadra Rai, *zamīndār* of Ponābālia, is said to have defeated the Marāthā army here in 1748. The village contains a temple of Siva, which is one of the fifty-one places of Hindu pilgrimage, scattered over India, where tradition relates that a limb or some portion of the body of the goddess Satī fell, while her husband Siva was perambulating the whole earth with her corpse on his shoulders. The nose of the goddess is said to have fallen at this place.

CHITTAGONG DIVISION

Chittagong Division.—Division of Eastern Bengal and Assam, lying between 20° 35′ and 24° 16′ N. and 90° 34′ and 92° 42′ E., in the extreme south of the Province. It is bounded on the west by the Bay of Bengal; on the north-west by the Dacca Division; on the north-east by Sylhet and Hill Tippera; on the east by the Lushai Hills and North Arakan; and on the south by Arakan. It comprises four Districts, as shown in the following table:—

District.	Area in square miles.	Population, 1901.	Demand for land revenue and cesses, 1903-4, in thousands of rupees.
Tippera	2,499	2,117,991	13,45
Noākhāli. . . .	1,644	1,141,728	8,32
Chittagong . . .	2,492	1,353,250	13,22
Chittagong Hill Tracts .	5,138	124,762	*
Total	11,773	4,737,731	34,99

* In the Chittagong Hill Tracts the so-called land revenue consists of the rents assessed on lands cultivated with the plough, and no cesses are levied.

The head-quarters of the Division are at CHITTAGONG TOWN. The recorded population was 3,441,430 in 1872, 3,569,071 in 1881, 4,190,081 in 1891, and 4,737,731 in 1901. The most marked characteristic is the large proportion of Muhammadans, who in 1901 numbered 3,333,000, or 70 per cent. of the whole population; Hindus numbered 1,251,000, or 26 per cent., and Buddhists 150,000, or 3 per cent., while there were 2,443 Christians and 800 of other religions. The density of population is 402 persons per square mile, or 695, if the sparsely inhabited Hill Tracts are excluded. The Division contains 6 towns and 9,740 villages. The only town with more than 20,000 inhabitants is Chittagong (population, 22,140), but COMILLA (19,169) and BRĀHMANBĀRIA (19,915) very nearly approach that figure.

The position of Chittagong as the base for operations against the Lushais before they were turned into peaceable British subjects formerly gave the Division a much greater political importance than it now possesses. As chairman of the Com-

missioners of the Chittagong port, the Commissioner has to deal with a number of commercial questions; and in the Chittagong Hill Tracts he exercises direct administrative control, and has the powers of a Sessions Judge and of an Inspector-General of police. The Government estates in this Division are more important than in any other, especially in Chittagong District, the aggregate rental being 8·43 lakhs, or nearly a third of the total land revenue. No less than 2,085 square miles are 'reserved' as forest. Chittagong is the chief port in Eastern Bengal, and CHĀNDPUR, on the Meghnā, is a rapidly growing jute centre which taps one of the most important jute-growing tracts in the world, while SITĀKUND is a much-frequented place of pilgrimage. The State of HILL TIPPERA is under the political supervision of the Commissioner.

Boundaries, configuration, and hill and river systems.

Tippera (*Tripurā*).—District in the Chittagong Division of Eastern Bengal and Assam, lying between 23° 2′ and 24° 16′ N. and 90° 34′ and 91° 22′ E., with an area of 2,499 square miles. It is bounded on the north-west by the Districts of Dacca and Mymensingh; on the north-east by Sylhet; on the east by the State of Hill Tippera; on the south by Noākhāli; and on the west by the Meghnā river, which separates it from Farīdpur, Dacca, and Mymensingh.

Tippera is a level alluvial plain broken only by the isolated Lālmai hills, 5 miles west of Comilla, which rise to a height of 40 to 100 feet. It is well cultivated and is intersected in all directions by rivers, which in the south and west are tidal. To the east the country undulates, and runs into the series of low forest-clad hills which form the most westerly of the Hill Tippera ranges. The west is inundated during the rains. The drainage passes west and south-west across the District from the watershed in Hill Tippera, and finds an exit either in the Meghnā or in the Bay of Bengal. The MEGHNĀ sweeps past the western border, a noble estuary some 4 miles in breadth; the other important rivers are the Gumtī, Dākātia, and Titās. The Gumtī rises in Hill Tippera, and flows westwards past the town of Comilla, joining the Meghnā above Daudkāndi in 23° 22′ N. and 90° 42′ E.; its direct length in British territory is 36 miles. The Dākātia also follows a westerly course from its source in Hill Tippera until it joins the Meghnā, passing the villages of Lākshām and Hājiganj. Its original exit into the Meghnā was at Raipur, but the main stream now passes Chāndpur down what was originally an artificial channel. The Titās is the chief river of the north of the District and passes Brāhmanbāria. These rivers are navigable throughout the

year by boats of 4 tons burden for the greater part of their course. The Muharī, Bijaigangā, and Burhī Gangā are navigable by boats of 4 tons burden during the rains. Extensive marshes in the north of the District, covering an aggregate area of 92 square miles, are utilized for pasture and for growing reeds.

Geology. The Lālmai hills and the undulating country in the east are formed chiefly of Upper Tertiary rocks. The rest of the District is covered by recent alluvium, consisting of sandy clay and sand along the course of the rivers, and of fine silt consolidating into clay in the flatter parts of the river plain.

Botany. The Lālmai range is covered with a forest of trees and brushwood, including species of *Linostoma*, *Dalhousiea*, *Licuala*, *Connarus*, *Grewia*, and *Bridelia*. The flat ground is intersected by rivers and *khāls* often partially affected by the tide; these streams are fringed by a riparian vegetation of reeds and bushes similar to those met with in the northern Sundarbans. The villages are built amid plantations of areca palms, bamboos, jack and mango trees. In the marshes are found *solā* (*Aeschynomene paludosa*), *Sesbania*, *sītalpāti* (*Phrynium dichotomum*), and similar aquatic plants; and the *muktapāti* (*Clinogyne dichotoma*), a scitamineous shrub, often covers large areas.

Fauna. In the forest-clad hills along the eastern border tigers, leopards, wild hog, and various species of wild cats are to be found.

Temperature and rainfall. The temperature is moderate, the mean for the year being 78° and the average maximum never exceeding 91°. Humidity is exceptionally high, the average for the year being 86 per cent. Rainfall commences early with violent 'nor'-westers' in March and April, when the normal fall is 2·9 and 5·5 inches respectively. The average for the year is 75 inches, of which 10·3 inches fall in May, 14·1 in June, 13 in July, 12·9 in August, 9·2 in September, and 4·7 in October.

History. The District of Tippera formed part of the dominions of the Rājā of Hill Tippera State until 1733. Its history prior to that date is that of HILL TIPPERA. This State was invaded by the Muhammadans as early as 1279 and again in 1345 and 1620, but on each occasion the Rājā ultimately succeeded in maintaining his independence. In 1733, however, Shujā-ud-dīn Khān, governor of Bengal, overran the country; and from that date the plains portion of the State, corresponding to the modern Tippera District and part of Noākhāli, became an integral part of the Mughal empire. In 1765 the administration of the District passed into the hands of the East India

Company; but even then more than a fifth of the present area was under the immediate rule of the Rājā of Hill Tippera, who paid a tribute of ivory and elephants. At that time Tippera and Noākhāli Districts were included in the *ihtimām* or division of Jalālpur, which was administered by two native officers until 1769, and from that date until 1772 by three English Supervisors. In 1772 a Collector was appointed, and nine years later Tippera and Noākhāli were constituted a single revenue charge; they were subsequently separated in 1822. Since then great changes have been made in the boundaries of the District, but the only event which has occurred to break the peaceful monotony of British rule was a serious raid in 1860 by the Kūkis or Lushais. These savages entered the District from Chhāgalnaiya, burnt and plundered fifteen villages, murdered 185 British subjects, and carried off 100 captives. In 1861 a large body of military police, under Captain Raban, marched against Rattan Puiyā's village in the south Lushai Hills to avenge this raid; but no sooner did they appear in sight than the Kūkis themselves set fire to the place, and fled into the jungle, where pursuit was impossible.

The population is increasing rapidly, having risen from 1,404,045 in 1872 to 1,514,361 in 1881, 1,782,935 in 1891, and 2,117,991 in 1901. The last figure gives a density of 848 persons per square mile, which is by far the highest rate in the Division, Noākhāli having only 694 and Chittagong 543 persons per square mile. The principal statistics of the Census of 1901 are shown below:— The people.

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Comilla . .	1,142	1	2,939	957,699	839	+ 16.6	67,175
Brāhmanbāria .	769	1	1,319	677,084	880	+ 14.7	38,563
Chāndpur .	588	1	1,103	483,208	822	+ 30.0	30,452
District total	2,499	3	5,361	2,117,991	848	+ 18.8	136,190

The three towns are COMILLA, the head-quarters, BRĀHMANBĀRIA, and CHĀNDPUR. The density of population is greatest in the fertile tract along the bank of the Meghnā (except in the extreme north, where there are numerous unreclaimed marshes), and in the old settled tract to the east, north, and south of Comilla. It is lowest in the centre and south of the District, but this tract is being rapidly developed. Tippera is

eminently prosperous, the Muhammadan population is prolific, and jute cultivation has received a great impetus from the construction of the Assam-Bengal Railway. The increase during the last decade is entirely due to the procreative capacity of the people living in the District, and has not been assisted by immigration. The exceptional increase in the Chāndpur subdivision, which has more than doubled its population since 1872, is caused by the rapid spread of jute cultivation, the formation of new accretions along the bank of the Meghnā, and the development of trade in Chāndpur town. The District is very fertile, and is capable of supporting a much larger population than it bears at present; and its continuous prosperity has not been broken by any serious crop-failure or wave of unhealthiness. The language spoken is the dialect of Bengali known as Eastern or Musalmāni Bengali.

In 1901 Muhammadans numbered 1,494,020, or nearly 71 per cent. of the population; they are increasing far more rapidly than the Hindus, who now number 622,339, or 29 per cent.

Castes and occupations.

Nearly all the Muhammadans are Shaikhs, who are probably descendants of converts from Hinduism. The most numerous Hindu castes are the fishing and cultivating Chandāls (115,000) and Kaibarttas (72,000), and the weaving Jugis (68,000). The Kāyasths (writers) number 70,000, and the Brāhmans 36,000. The population is almost entirely agricultural, 79 per cent. being dependent on this means of livelihood.

Christian missions.

There were 292 Christians, of whom 143 were natives. A branch of the New South Wales Baptist Mission conducts medical and educational work at Comilla, and the New Zealand Baptist Mission has branches at Brāhmanbāria and Chāndpur.

General agricultural conditions and principal crops.

The soil is exceedingly fertile, and the rainfall is sufficient to enable the cultivators to dispense with irrigation. The chief agricultural statistics for 1903-4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Comilla	1,142	644	159
Brāhmanbāria	769	595	28
Chāndpur	588	489	35
Total	2,499	1,728	222

Of the cultivated area, 27 per cent. bears two crops in the year. Rice is the principal staple, occupying 1,459 square miles, or 84 per cent. of the net cropped area. There are three harvests. The autumn crop is sown on the higher lands

and is reaped in July and August, the spring crop is harvested in April, and the winter crop between November and January; the last mentioned covers two-thirds of the entire area under rice. Next comes jute (416 square miles), the cultivation of which is rapidly extending and which now occupies 24 per cent. of the net cropped area. Tippera is thus one of the largest jute-growing Districts in the Province. Oilseeds, principally rape and mustard, occupy only one-sixth of the area devoted to the cultivation of jute. Among the food-crops grown in the winter are *kalai* (*Phaseolus radiatus*), *khesāri* (*Lathyrus sativus*), peas, and *rahar* (*Cajanus indicus*). The betel-nut palm (*Areca Catechu*) and the *pān* creeper (*Piper Betle*) are extensively grown in the south-west, and chillies (*Capsicum frutescens*) in the neighbourhood of the Meghnā river, the silt of which is especially suited to this crop. Other spices are coriander, turmeric, and ginger. Vegetables, such as beans, *arum* (*Colocasia Antiquorum*), *baigun* (*Solanum Melongena*), yams, and pumpkins, are favourite articles of diet. Sugar-cane and tobacco are grown on a small scale.

Cultivation is extending rapidly with the growth of population, and the marshes are gradually silting up and being reclaimed. The peasantry are prosperous and rarely require Government loans. Irrigation is little practised; but water is sometimes lifted on to high lands, and in the east of the District hill streams are dammed for this purpose.

Cattle.

The cattle are poor, and pasture has become scarce with the extension of cultivation. A large cattle market is held weekly at Bātākāndi during the dry season.

Arts and manufactures.

The Maynāmati cloth manufactured near Comilla finds an extensive sale in the local markets, and is exported to the neighbouring Districts. Brass utensils, pottery, rough agricultural tools, cane and bamboo baskets, mats, and *gur* are also manufactured. Jute is pressed and baled by machinery at Chāndpur, Akhaurā, and Chātalpār. The *sītalpāti* reed (*Phrynium dichotomum*) is woven into fine mats.

Commerce.

The Assam-Bengal Railway now carries the bulk of the traffic in the east of the District, but in the west the rivers are still largely used. The principal exports are jute and rice; about 45,000 tons of jute and 26,000 tons of rice were exported by rail in 1903–4. Jute is sent to Nārāyanganj, Calcutta, and Chittagong, and much of it is now baled at Chāndpur; the rice goes to Assam, Nārāyanganj, and Chittagong. Minor exports are betel-nuts, *gur*, gunny-bags, hides, mats, chillies, oilseeds, and country cloth. Cotton is brought down from

Hill Tippera and re-exported. The chief imports are cotton goods, cotton twist, salt, and kerosene oil; their value is considerably less than that of the exports. The chief centres of trade are Chāndpur and Matlab Bāzār on the Meghnā; Hājīganj, Chitosi, Daulatganj, and Bāghmāra on the Dākātia; Comilla, Gaurīpur, Lālpur, Jafarganj, Companyganj, and Pānchpukuriā on the Gumtī; and Chānduriā, Brāhmanbāria, Akhaurā, and Rāmchandrapur on the Titās.

Railways and roads.

The Assam-Bengal Railway traverses the east of the District from north to south, communicating with Chāndpur by a branch line from Lākshām; another branch from Lākshām to Noākhāli has recently been completed. The District board maintains 309 miles of roads, of which 10 miles are metalled. The Dacca-Chittagong trunk road, which runs north to Comilla and thence west to Daudkāndi, is maintained from Provincial funds. Other important roads connect Comilla with Chuntā, via Brāhmanbāria, and Sarail with Chāndpur and Companyganj.

Water communications.

Water communications are important, as 630 miles are navigable throughout the year and 460 more during the rains; in fact, in the rainy season the roads are but little used, and the people move about and transport their goods mainly by water. The Assam steamers call at Chāndpur, and the railway steamers ply thence to Goalundo; daily steamers run also in connexion with the Assam-Bengal Railway from Akhaurā to Chānduriā via Brāhmanbāria. There are many important ferries across the Meghnā and Gumtī rivers.

District subdivisions and staff.

For purposes of administration the District is divided into three subdivisions, with head-quarters at COMILLA, BRĀHMANBĀRIA, and CHĀNDPUR. At Comilla the District officer is ordinarily assisted by a staff of five Deputy-Magistrate-Collectors. Chāndpur subdivision is in charge of a Joint or Assistant Magistrate and Brāhmanbāria of a Deputy-Magistrate-Collector; an additional Deputy-Magistrate-Collector is posted to the latter and a Sub-Deputy-Collector to the former subdivision.

Civil and criminal justice.

The District and Sessions Judge, four Sub-Judges, and six Munsifs are stationed at Comilla, three Munsifs each at Brāhmanbāria and Chāndpur, and two each at Nabīnagar and Kasbā. The criminal courts include those of the District and Sessions Judge, the District Magistrate, and the above-mentioned Deputy-Magistrates. Culpable homicide is common, being generally due to land disputes; offences against women appear to be on the increase.

The District was first assessed by the Muhammadan govern-

ment for Rs. 92,993, of which, however, the Rājā of Hill Tippera retained Rs. 45,000, so that the net demand was only Rs. 47,993. In 1739 an enhancement was made, and by 1763 the revenue had risen to Rs. 1,89,751. At the Permanent Settlement the assessment of this District and of Noākhāli jointly was fixed at 9·94 lakhs. By 1800 this had grown to 11·56 lakhs, probably owing to the resumption of invalid revenue-free grants. The demand from Tippera alone in 1903–4 was 10·89 lakhs, due from 2,376 estates. Of these, 2,070 estates paying 9·39 lakhs were permanently settled, 56 paying Rs. 28,000 were temporarily settled, and the remainder, 250 estates paying 1·22 lakhs, were managed direct by Government. The incidence of the revenue on each cultivated acre is R. 0–14–9, the revenue representing 25·8 per cent. of the rental, which is 42 lakhs. Most of the large proprietors are absentees. There is an enormous number of tenures of various kinds, some of which are held at fixed rates in perpetuity, while others, such as the *tashkhīsi*, are liable to enhancement from time to time. A full account of these tenures will be found in chapter iv of the Settlement Report of the Chakla Roshnābād estate. This is the most important estate in the District. It belongs to the Rājā of Hill Tippera, and has recently been surveyed and settled. Statistics of rentals for the District are not forthcoming, but in the Chakla Roshnābād estate the all-round rate per acre for land held by settled and occupancy ryots is Rs. 3–5–1. For cultivated lands in this estate ryots at fixed rates pay Rs. 2–1–3 and Rs. 2–3–7 per acre, settled and occupancy ryots Rs. 4–1–7 and Rs. 3–11–2, non-occupancy ryots Rs. 3–4 and Rs. 2–6, and under-ryots Rs. 4–4–3 and Rs. 4–12–6 in the two portions of the estate. The average area of a settled ryot's holding is 2·9 acres in the north and 3 acres in the south of the estate.

Land revenue.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue .	10,16	10,41	10,58	11,06
Total revenue .	16,27	18,38	23,22	24,68

Outside the COMILLA, BRĀHMANBĀRIA, and CHĀNDPUR municipalities, local affairs are managed by a District board, with a local board for each subdivision. In 1903–4 the income of the District board was Rs. 2,31,000, of which Rs. 1,15,000 was derived from rates; and the expenditure was Rs. 2,45,000,

Local and municipal government.

including Rs. 1,04,000 spent on public works and Rs. 70,000 on education.

Public works.

Embankments have been constructed to confine the Gumtī river below Comilla, and thus to protect the country from inundation; in 1845 they were made over to the *zamīndārs* for maintenance.

Police and jails.

The District contains 13 *thānas* or police stations and 4 outposts. The force under the District Superintendent in 1903 numbered 3 inspectors, 37 sub-inspectors, 19 head constables, and 317 constables, while the village watch consisted of 296 *daffadārs* and 3,207 village *chaukīdārs*. The District jail at Comilla has accommodation for 308 prisoners, and sub-jails at the subdivisional head-quarters for 29 prisoners.

Education.

At the Census of 1901, 6·4 per cent. of the population (12·1 males and 0·5 females) were returned as literate; but those who knew English were below the average for Eastern Bengal. The total number of pupils in the schools increased from 74,174 in 1883–4 to 83,675 in 1892–3, but fell again to 69,740 in 1900–1. The numbers at school in 1903–4 were 71,913 boys and 9,037 girls, being respectively 44·1 and 5·8 per cent. of those of school-going age. Educational institutions, public and private, in that year numbered 2,728, including an Arts college, 101 secondary schools, and 2,281 primary schools. The expenditure on education was 3·35 lakhs, of which Rs. 19,000 was met from Provincial funds, Rs. 65,000 from District funds, Rs. 1,400 from municipal funds, and 1·82 lakhs from fees. The most important institution is the Arts college at Comilla. Ten primary schools have been opened for the Tipperas dwelling in the Lālmai hills.

Medical.

In 1903 the District contained 18 dispensaries, of which 4 had accommodation for 46 in-patients. Altogether 287,000 out-patients and 580 in-patients were treated at these dispensaries during the year, and 7,000 operations were performed. The expenditure was Rs. 26,000, of which Rs. 1,200 was met from Government contributions, Rs. 13,000 from Local and Rs. 4,000 from municipal funds, and Rs. 6,000 from subscriptions.

Vaccination.

Vaccination is compulsory only within the municipal areas. In 1903–4 the number of successful vaccinations was 75,000, representing 35 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. vi (1875); the Rev. James Long, 'Abstract of the Rājmāla,' *Journal of the Asiatic Society of Bengal*, vol. xix, p. 533 (1850); A. Mackenzie, *North-East Frontier of Bengal* (Calcutta, 1869

and 1884); and J. G. Cumming, *Settlement Report of Chakla Roshnābād Estate* (Calcutta, 1899).]

Comilla Subdivision.—Head-quarters subdivision of Tippera District, Eastern Bengal and Assam, lying between 23° 3′ and 23° 48′ N. and 90° 38′ and 91° 22′ E., with an area of 1,142 square miles. The greater portion of the subdivision is a level alluvial plain broken only by the Lālmai hills, 5 miles to the west of Comilla town; on the east this plain is bounded by the low jungle-clad hills of Hill Tippera. The population in 1901 was 957,699, compared with 821,285 in 1891. The density was 839 persons per square mile. The subdivision contains one town, COMILLA (19,169), the head-quarters; and 2,939 villages.

Brāhmanbāria Subdivision.—Subdivision in the north of Tippera District, Eastern Bengal and Assam, lying between 23° 36′ and 24° 16′ N. and 90° 43′ and 91° 20′ E., with an area of 769 square miles. The subdivision is an alluvial tract, laid out for the most part in well-cultivated fields; but to the east the country is more undulating, and contains a number of low hills covered with scrub-wood. The population in 1901 was 677,084, compared with 590,097 in 1891. The density was 880 persons per square mile, which exceeds the average for the District. The subdivision contains one town, BRĀHMANBĀRIA (19,915), the head-quarters; and 1,319 villages.

Chāndpur Subdivision.—Subdivision in the south-west of Tippera District, Eastern Bengal and Assam, lying between 23° 2′ and 23° 29′ N. and 90° 34′ and 91° 2′ E., with an area of 588 square miles. The subdivision is an alluvial flat intersected in all directions by rivers and streams, which are partially affected by the tides. The population in 1901 was 483,208, compared with 371,553 in 1891. The density was 822 persons per square mile. This is the most progressive part of the District. It contains one town, CHĀNDPUR (9,362), the head-quarters; and 1,103 villages.

Chakla Roshnābād.—A permanently settled estate, with an area of 570 square miles, belonging to the Rājā of Hill Tippera, situated in the Eastern Bengal Districts of Tippera and Noākhāli, and in the Assam District of Sylhet. In 1901–2 the demand for revenue was 1·53 lakhs and for cesses Rs. 56,000; the annual income from rents and cesses is 8 lakhs.

The estate originally formed part of the State of Hill Tippera, which came into the possession of the Muhammadans in 1733. The Muhammadans never troubled themselves about the hills, but they assessed the plains to revenue, and the East

India Company followed their example. The revenue assessed at the Permanent Settlement in 1793 was *sicca* Rs. 1,39,676. At the request of the Rājā, the estate was brought under survey and settlement in 1892–9, and the final report supplies complete information regarding it. Excluding the portion in Sylhet, which was not surveyed, the area measured was 558 square miles, of which 401 were cultivated, 39 cultivable waste, and the rest was made up of uncultivable lands and water; 517 square miles were rent-paying, and of this area 252 square miles were held direct by ryots, 208 square miles by tenure-holders with variable rents, and the balance by tenure-holders at fixed rents. The tendency is towards subdivision of the tenures rather than in the direction of further sub-infeudation. The average area of a ryot's holding is 3¼ acres, from which he derives a net income of Rs. 133 per annum. Rice covered four-fifths of the cultivated area, the other important crops being jute (8,000 acres), chillies (6,700 acres), mustard (4,932 acres), and sugar-cane (1,687 acres). The population of the estate in 1891 was 467,000, or 837 persons per square mile. The settlement increased the rental of the estate from 5·84 lakhs to 6·76 lakhs, or by 16 per cent., the cost of the operations being 5·28 lakhs, or Rs. 1–8 per acre.

Brāhmanbāria Town.—Head-quarters of the subdivision of the same name in Tippera District, Eastern Bengal and Assam, situated in 23° 59′ N. and 91° 7′ E., on the north bank of the Titās river. Population (1901), 19,915. Brāhmanbāria was constituted a municipality in 1868. The income during the decade ending 1901–2 averaged Rs. 8,000, and the expenditure Rs. 7,000. In 1903–4 the income was Rs. 9,000, mainly derived from a tax on persons (or property tax); and the expenditure was Rs. 8,000. Brāhmanbāria is connected by steamer with the Assam-Bengal Railway at Akhaurā, and a considerable trade in rice and jute passes through it to Bhairab Bāzār in Mymensingh District.

Chāndpur Town.—Head-quarters of the subdivision of the same name in Tippera District, Eastern Bengal and Assam, and a terminus of the Assam-Bengal Railway, situated in 23° 13′ N. and 90° 38′ E., at the junction of the Meghnā river and a channel from the Dākātia. Population (1901), 9,362. The town is growing rapidly, owing to its favourable situation for the jute traffic. Chāndpur was constituted a municipality in 1897. In 1903–4 the income was Rs. 17,000, of which Rs. 8,000 was derived from a tax on houses and

lands, and Rs. 4,000 from ferry tolls; and the expenditure was Rs. 15,000. The municipality maintains a large Pasteur filter. The town has steamer communication with Calcutta (through the Sundarbans), Goalundo, Nārāyanganj, Assam, and Cāchār; and several jute-presses are located here.

Comilla Town (*Kumillā*).—Head-quarters of Tippera District, Eastern Bengal and Assam, situated in 23° 28′ N. and 91° 11′ E., on the Gumtī river, on the main road from Dacca to Chittagong. Population (1901), 19,169. Comilla was constituted a municipality in 1864. The income during the decade ending 1901–2 averaged Rs. 22,500, and the expenditure Rs. 21,000. In 1903–4 the income was Rs. 30,000, of which Rs. 9,000 was derived from a tax on persons (or property tax), and Rs. 7,000 from a conservancy rate; and the expenditure was Rs. 27,000. The town is protected from inundation by an embankment along the bank of the Gumtī, which is maintained by the Rājā of Hill Tippera. The Dharmasāgar is a splendid tank, a mile in circumference, which was constructed by a Rājā of Tippera in the fifteenth century. Comilla contains an English church, the usual public offices, including a jail with accommodation for 308 prisoners, a second-grade Arts college under private management, and one Government and two private schools teaching up to the entrance examination. An artisan school was established by the District board in 1890, which is affiliated to the Sibpur Engineering College.

Hājīganj.—Village in the Chāndpur subdivision of Tippera District, Eastern Bengal and Assam, situated in 23° 15′ N. and 90° 51′ E., on the Dākātia river and the Assam-Bengal Railway. Population (1901), 297. It is an important centre of river traffic. Betel-nuts and rice are exported in large quantities; the imports include salt, kerosene oil, and tobacco.

Lākshām.—Village in the head-quarters subdivision of Tippera District, Eastern Bengal and Assam, situated in 23° 15′ N. and 91° 8′ E. It is a railway junction, where the branch lines to Chāndpur and Noākhāli leave the main line of the Assam-Bengal Railway.

Noākhāli District.—District in the Chittagong Division of Eastern Bengal and Assam, lying between 22° 10′ and 23° 18′ N. and 90° 40′ and 91° 35′ E., with an area of 1,644 square miles. The District is named from a watercourse called the Noākhāli *khāl* (or 'new cut'), on the right bank of which Sudhārām, the head-quarters, is built. It is bounded on the north by the District of Tippera and the State of Hill

Boundaries, configuration, and hill and river systems.

Tippera; on the east by Chittagong District and the Sandwīp channel; on the south by the Bay of Bengal; and on the west by the Meghnā estuary.

The District consists of a tract of mainland together with a large number of islands in the mouth of the Meghnā, the largest of which are SANDWĪP and HĀTIA. The mainland is an alluvial plain broken only by a hilly tract in the extreme north-east corner, know as Baraiya Dhāla. The plain dips in the centre, forming a depression between the high bank of the Meghnā and the uplands in the north-east. The great estuary of the MEGHNĀ, here some 7 miles in breadth, sweeps past the western face of the District, beyond which lies Backergunge, and then follows the eastward trend of the coast, separating the mainland from the islands. The Hātia island divides it into two arms, of which the western is called the Shāhbāzpur river, because it separates Hātia from the island of Dakhin Shāhbāzpur in Backergunge District. As it passes eastward between Siddi island and the mainland, the Meghnā changes its name to the Bāmni. It then turns south between Sandwīp island and the coast of Chittagong, and in this final stage of its career it is called the Sandwīp channel. The approaches of the Meghnā estuary are rendered dangerous by the bore which rushes up these great arms of the sea at every new and full moon, and especially at the time of the equinox.

The chief tributaries of the Meghnā are the FENNY and Little Fenny rivers, which are navigable throughout the year. Both of them rise in Hill Tippera State, and flow in a generally south-westerly direction. The Fenny receives the Muharī on its right bank. The Dākātia river formerly found an exit at Raipur, but the bulk of its waters now flow westwards into the Meghnā, at Chāndpur in Tippera District.

The coast-line is moving southwards, built up by deposits of silt from the Meghnā, and Hātia island especially is extending rapidly in this direction. On the other hand, the sea is encroaching on Sandwīp island and on some parts of the mainland. Besides the great islands already mentioned, there are Nalchira which adjoins Hātia on the south, Bayley, Jabar, King, Behāri, and others. The settlement of the land revenue upon these islands as they gradually emerge from the bay and become cultivable is one of the problems of the administration of the District.

Geology. The surface consists of recent alluvial deposits of clay and sand from the Meghnā and its tributaries, except in the north-east, where there are hills of the Upper Tertiary formation.

Botany. The extensive groves of betel-nut palm (*Areca Catechu*), for which the north-west of the District is famous, give a forest-clad appearance to the country. There are numerous creeks and *khāls*; but the great quantity of fresh water brought down by the large rivers renders the conditions unfavourable for salt-marsh species, so that the vegetation characteristic of the Sundarbans is but sparingly represented, and the plant-life of the District is almost exclusively confined to the ordinary field crops and weeds of the lower Gangetic plain. *Sāl* (*Shorea robusta*), *chāplās* (*Artocarpus Chaplasha*), *jārul* (*Lagerstroemia Flos Reginae*), *gurjan* (*Dipterocarpus turbinatus*), and *gamhār* (*Gmelina arborea*) grow in the north-eastern uplands; and the coco-nut palm thrives all along the sea-board. There is a small forest on Tun island, which is worked as a 'reserve.'

Fauna. Tigers, leopards, and barking-deer are found in the hills in the north-east, where peafowl are also occasionally met with. Crocodiles and pythons are numerous.

Temperature and rainfall. The temperature is moderate; the mean varies from 80° to 83° between May and October, and the mean maximum does not exceed 89°. Humidity is very high, never falling below 85 and reaching 89 per cent. of saturation in October. The rainfall is heavy, the annual average being no less than 115 inches. It commences early with 3 inches in March, 4 in April, and 11 in May, while in June, July, and August the average fall is 22, 25, and 25 inches respectively.

Natural calamities. The position of the District renders it especially liable to destructive inundations from the bores at the mouth of the Meghnā which have already been referred to. It suffered severely from the cyclone of 1876, when Hātia lost more than half and Sandwīp nearly half of its inhabitants. This cyclone was followed by a terrible epidemic of cholera, and the mortality from both causes was estimated at 100,000.

History. Little is known of the early history of Noākhāli, but it is supposed that the first Muhammadan settlements were made at the time of the invasion of south-east Bengal by Muhammad Tughril in 1279. In 1353 the country was overrun by Shams-ud-dīn, governor of Bengal. The island of Sandwīp was noticed by European travellers in the sixteenth century as an exceptionally fertile spot. In the seventeenth century the Portuguese played an important part in the affairs of this part of the country. Numerous adventurers and masterless men had entered the service of the Rājā of Arakan, who, at the end of the sixteenth century, included Chittagong in his dominions. Expelled from Arakan in 1605, they betook themselves to

piracy, and succeeded in defeating a Mughal fleet sent against them. In 1609 they seized Sandwīp island, and under the leadership of one Gonzales became the terror of the coasts. In 1610 the Rājā of Arakan joined with the Portuguese in an attempt to take possession of Bengal, but after some successes the allies were routed by the Mughal troops. Gonzales next induced the viceroy at Goa to join him in an attack on Akyab; but the expedition proved a failure, and in 1616 the Rājā defeated Gonzales and took possession of Sandwīp. In 1664 Shaista Khān, governor of Bengal, won over the Portuguese by threats and cajolery and transported them to Dacca, where their descendants are still to be found; he thus made the way clear for the capture of Chittagong in 1666.

Noākhāli passed to the East India Company in 1765, at which time it and Tippera District were included in the *ihtimām* of Jalālpur. This was in charge of two native officers until 1769, and from that date until 1772 of three English Supervisors. In 1772 a Collector was appointed; but the District was administered from Dacca till 1781, when Tippera and Noākhāli were constituted a single revenue charge known as Bhuluā. In 1787 this charge was added to the collectorship of Mymensingh, but in 1790 it was again separated and the head-quarters were transferred to Tippera. In the latter year a Salt Agent was appointed at Sudhārām to superintend the manufacture of salt on the islands, and apparently acted as an assistant of the Collector of Tippera. Noākhāli was first detached from Tippera and constituted a District in 1822, the criminal administration being made over to a Joint-Magistrate and the Salt Agent being vested with the powers of a Collector; the former appears to have also held charge of the Collector's office from 1832 to 1860, when a regular Collector was appointed. Although the name of Noākhāli was adopted in 1822 as the designation of the Joint-Magistrate's jurisdiction, the District was in respect of revenue jurisdiction known as Bhuluā from that year till 1868, when the popular name of Noākhāli was first employed.

The people.

On account of the cyclone of 1876 the population declined from 840,376 in 1872 to 820,772 in 1881; but it has since been increasing by leaps and bounds, having risen to 1,009,693 in 1891 and 1,141,728 in 1901. Its Muhammadan inhabitants are prolific, the soil is very fertile, the climate is fairly healthy, and all the conditions are favourable to a rapid growth of population. The large gain of 13·1 per cent. during the last decade was entirely due to natural development, unaided

by immigration. The increase has been greatest in the north-west of the District, where the people have benefited by the expansion of jute cultivation. Although the inhabitants are, on the whole, healthy, the water-supply is very inferior, being usually derived from the shallow tanks or ditches from which earth has been taken to raise the plinths of the houses. The general elevation is so low that, except along the banks of certain rivers, all houses have to be built on artificial mounds; each man erects his residence in the middle of his fruit trees and cultivation, and there are few of the crowded village sites so common farther west.

The principal statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Noākhāli .	1,301	1	1,955	822,891	632	+ 14·4	49,859
Fenny . .	343	...	678	318,837	930	+ 9·7	11,819
District total	1,644	1	2,633	1,141,728	694	+ 13·1	61,678

The only town is SUDHĀRĀM, the head-quarters of the District. The language spoken is the corrupt dialect of Bengali known as Chatgaiyā from Chittagong. Muhammadans numbered 866,290, or 76 per cent. of the total, and Hindus 274,474.

Castes and occupations.

Nearly all the Muhammadans are Shaikhs, and the majority are probably descendants of local converts to Islām. They belong to the puritanical sect of Farāzis. The Jugis (47,000) are a weaving caste, and the rest of the caste in Eastern Bengal regard the family at Dallāl Bāzār in this District as the head of their race. Next come the fishing and cultivating aboriginal castes of Kaibarttas (38,000) and Chandāls (27,000). The number of Kāyasths (34,000) is swelled by the pretensions of members of lower castes who have got on in the world and now claim to be Kāyasths. Most of the Hindu castes in this District have suffered in the estimation of their fellows owing to the outrages perpetrated by the Maghs when they overran the District. This has led in many cases to the formation of sub-castes, known as Maghia, with whom members of the same castes residing elsewhere refuse to eat or intermarry. No less than 78 per cent. of the population are agriculturists; 8 per cent. live by industry, 2 per cent. belong to the professions, and less than 7 per cent. are general labourers.

Christian missions.

Roman Catholic and Baptist missions are at work in Noākhāli, but they have gained very few converts. The number of native Christians in 1901 was only 158.

General agricultural conditions.

The soil is a rich alluvium, annually inundated and fertilized by valuable deposits of silt from the Meghnā estuary, in which the Ganges and the Brahmaputra river systems converge.

Chief agricultural statistics and principal crops.

The chief agricultural statistics for 1903-4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.	Forests.
Noākhāli . .	1,301	1,002	47	5
Fenny . . .	343	268	14	...
Total	1,644	1,270	61	5

Nearly 22 per cent. of the cultivated area yields two crops annually. By far the most important product is rice, which occupies 82 per cent. of the total area under cultivation. Three-fourths of it is harvested in the winter and the remainder in the autumn. The winter crop is generally transplanted, but the early rice is sown broadcast. The central *thānas*, however—Begamganj, Rāmganj, and the east of Lakshmīpur—lie so low that transplantation is often impossible, and here the autumn and winter rice are sown broadcast together. Pulses occupy 9 per cent. of the net cropped area, and linseed and other oilseeds 5 per cent. The cultivation of jute is spreading, but in the District as a whole it is not as yet a crop of much importance. Little manuring is practised, as the fertile soil, renovated annually by deposits of silt from the overflowing rivers, bears rich crops year after year without exhaustion; the heavy and regular rainfall also precludes the necessity for irrigation. Every house is surrounded by groves of betel-nut and coco-nut palms.

Improvements in agricultural practice.

Cultivation is gradually extending upon the newly formed islands at the mouth of the Meghnā. Agricultural loans under the Acts are rarely taken, though in 1896, when the crops partially failed, Rs. 23,000 was borrowed.

Cattle.

Cattle and buffaloes are plentiful and find abundant pasturage on the islands, but there is little on the mainland. The cattle are very inferior, and suffer greatly from both rinderpest and foot-and-mouth disease.

Arts and manufactures.

The local arts and manufactures are few and unimportant. A little cotton cloth is woven, and coco-nut oil is manufactured; bamboo mats and baskets, fishing nets, and agricultural imple-

ments are made, but only in sufficient quantities to meet local requirements.

The principal exports are rice, betel-nuts, coco-nuts, linseed, chillies and onions, hides, and eggs; and the principal imports are European piece-goods, salt, kerosene oil, mustard oil, tobacco, sugar, *gur*, cotton yarn, brass and bell-metal articles, hill bamboos, china-ware, and betel-leaf. Noākhāli is one of the largest rice-producing Districts in Eastern Bengal, and it has been estimated that a quarter of a million tons are exported every year; the bulk of it finds its way to either Calcutta or Chittagong for shipment oversea. Commerce.

The Assam-Bengal Railway traverses the east of the District, and a branch line from Lākshām to Sudhārām has recently been opened. Excluding 227 miles of village tracks, the District contains 357 miles of roads, of which only 8 are metalled. The Chittagong trunk road to Dacca passes through the east of the District and is maintained as a Provincial work; the other important roads connect Sudhārām with Fenny, with Comilla, and with the west of the District. During the rains most of the traffic is by water along artificial channels which follow the principal roads. Bhawānīganj and Sudhārām are connected with Barisāl by a regular steamer service. Important ferries connect the islands of Sandwīp and Hātia with the mainland, and cross the Fenny and Little Fenny rivers on the Chittagong-Dacca road. Railways and roads.

For administrative purposes the District is divided into two subdivisions, with head-quarters at SUDHĀRĀM and FENNY. The Magistrate-Collector is assisted by four Deputy-Magistrate-Collectors, besides two Sub-Deputy-Collectors at Sudhārām, a Deputy-Collector at Fenny, and a Sub-Deputy-Collector at Sandwīp. District subdivisions and staff.

For the disposal of civil work the courts subordinate to the District and Sessions Judge are those of three Munsifs at Sudhārām, two each at Lakshmīpur and Fenny, and one each at Sandwīp and Hātia, besides that of an additional Munsif for Sandwīp and Lakshmīpur. The criminal courts include those of the Sessions Judge, the District Magistrate, and the above-mentioned magistrates. The people are extremely litigious, but violent crime is rare; burglary, theft, arson, cattle-poisoning, and perjury are the commonest offences. Civil and criminal justice.

Of the current land revenue demand for 1903–4, which amounted to 6·68 lakhs, 4·61 lakhs was due from 1,544 permanently settled estates, Rs. 59,000 from 49 temporarily settled estates, and 1·48 lakhs from 235 estates managed direct Land revenue.

by Government. Of the last, 216 estates paying 1·41 lakhs belong to Government. The temporarily settled and Government estates are situated upon the islands at the mouth of the Meghnā; survey and settlement proceedings are in progress in these estates, which are resettled periodically for short terms, generally for fifteen years. The rates of rent here vary from 7 annas to Rs. 2–12–9 per acre, the average being Rs. 2–3–3. Reclaiming tenures are common in the newly formed lands; they are usually of a permanent character and extend to several degrees of sub-infeudation. The highest grade of tenure is usually called a *tāluk*, and below it are the *haolā* and *shikmī*; all these are governed by Regulation VIII of 1819, but not the subordinate tenures, which go by the names of *osat-tāluk*, *nim-haolā*, and *darshikmī*. Part of the estate known as Chakla Roshnābād, which belongs to the Rājā of Hill Tippera, lies within the District. In this estate the all-round rate of rent per acre paid by settled and occupancy ryots is Rs. 3–10–4, the incidence on each cultivated acre being Rs. 4–4–8. The average size of each holding is 6·7 acres, of which 5·7 acres are cultivated.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees :—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	6,32	6,34	6,36	7,11
Total revenue . .	10,48	11,02	12,77	13,78

Local and municipal government.

Outside the Sudhārām municipality, local affairs are managed by the District board, with subdivisional local boards. In 1903–4 the income of the District board was Rs. 1,34,000, of which Rs. 66,000 was derived from rates; and the expenditure was Rs. 1,53,000, including Rs. 74,000 spent on public works and Rs. 42,000 on education.

Police and jails.

The District contains 9 *thānas* (or police stations) and 5 outposts. The force under the District Superintendent in 1903 numbered 3 inspectors, 20 sub-inspectors, 22 head constables, and 237 constables; the rural police consisted of 201 *daffadārs* and 2,118 *chaukīdārs*. The District jail at Sudhārām has accommodation for 149 prisoners, and a subsidiary jail at Fenny for 23.

Education.

Noākhāli lags behind the neighbouring Districts in education, and only 5·4 per cent. of the population (10·5 males and 0·3 females) were literate in 1901. The total number of pupils

rose from 32,855 in 1881–2 to 52,954 in 1892–3, but fell again to 41,485 in 1900–1. In 1903–4, 48,418 boys and 5,218 girls were at school, being respectively 56·7 and 6·1 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 1,770: namely, 54 secondary, 1,373 primary, and 343 special schools. The expenditure on education was 1·45 lakhs, of which Rs. 13,000 was met from Provincial funds, Rs. 40,000 from District funds, Rs. 200 from municipal funds, and Rs. 81,000 from fees.

Medical relief has made substantial progress in recent years. In 1903 the District contained 13 dispensaries, of which 2 with 24 beds had accommodation for in-patients. Treatment was afforded during the year to 149,000 out-patients and 343 in-patients, and 4,000 operations were performed. The expenditure was Rs. 15,000, of which Rs. 2,000 was met from Government contributions, Rs. 9,000 from Local and Rs. 600 from municipal funds, and Rs. 3,000 from subscriptions. Medical.

Vaccination is not compulsory except in Sudhārām municipality, and there is a good deal of opposition to it. In 1903–4 the number of successful vaccinations was 37,000, representing 32·3 per 1,000 of the population. Vaccination.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. vi (1876); J. G. Cumming, *Settlement Report of the Chakla Roshnābād Estate* (Calcutta, 1899).]

Noākhāli Subdivision.—Head-quarters subdivision of Noākhāli District, Eastern Bengal and Assam, lying between 22° 10′ and 23° 10′ N. and 90° 40′ and 91° 33′ E., with an area of 1,301 square miles. It consists of a tract of mainland, which is a recent alluvial formation, and of several islands on the face of the Bay of Bengal at the mouth of the Meghnā, the largest of which are SANDWĪP and HĀTIA. The population in 1901 was 822,891, compared with 719,163 in 1891, the density being 632 persons per square mile. There is one town, SUDHĀRĀM (population, 6,520), the head-quarters; and 1,955 villages.

Fenny Subdivision.—Eastern subdivision of Noākhāli District, Eastern Bengal and Assam, lying between 22° 43′ and 23° 18′ N. and 91° 15′ and 91° 35′ E., with an area of 343 square miles. It consists of low-lying alluvium, with the exception of a narrow strip of land on the east adjoining Hill Tippera, where the country is more undulating. The population in 1901 was 318,837, compared with 290,530 in 1891, the density being 930 persons per square mile. There are

678 villages, of which the most important is FENNY, the head-quarters; but no town.

Fenny Village.—Head-quarters of the subdivision of the same name in Noākhāli District, Eastern Bengal and Assam, situated in 23° 1′ N. and 91° 25′ E., on the Assam-Bengal Railway. Population (1901), 5,663. Fenny contains the usual public offices; the sub-jail has accommodation for 23 prisoners.

Lakshmīpur.—Village in the head-quarters subdivision of Noākhāli District, Eastern Bengal and Assam, situated in 22° 57′ N. and 90° 51′ E. Population (1901), 4,794. In 1756 a cloth factory was established here by the East India Company. It is still a busy trade mart.

Raipur Village.—Village in the head-quarters subdivision of Noākhāli District, Eastern Bengal and Assam, situated in 23° 2′ N. and 90° 47′ E., on the left bank of the Dākātia river. Population (1901), 3,738. It is a busy trading mart.

Sudhārām.—Head-quarters of Noākhāli District, Eastern Bengal and Assam, situated in 22° 49′ N. and 91° 7′ E., on the right bank of the Noākhāli *khāl.* It is named from Sudhārām Muzumdār, an early settler, who dug a fine tank still in existence. Population (1901), 6,520. Sudhārām was constituted a municipality in 1876. The income and expenditure during the decade ending 1901–2 averaged Rs. 8,000. In 1903–4 the income was Rs. 12,000, of which Rs. 3,000 was derived from a tax on persons (or property tax) and Rs. 5,000 from a conservancy rate; and the expenditure was Rs. 11,700. The town contains the usual public offices; the jail has accommodation for 149 prisoners.

Boundaries, configuration, and hill and river systems.

Chittagong District (*Chattagrām*).—District in the Division of the same name, Eastern Bengal and Assam, lying between 20° 35′ and 22° 59′ N. and 91° 30′ and 92° 23′ E., with an area of 2,492 square miles. It lies on the east of the Bay of Bengal, and is separated on the south from the Akyab District of Burma by the Naaf estuary; on the north the Fenny river divides it from Noākhāli and Tippera Districts; and on the east lie the Chittagong Hill Tracts. In shape it resembles an acute-angled triangle, 166 miles in length, its base resting on the Fenny river and its apex terminating in the promontory of Teknaaf; its breadth along the northern boundary is 26 miles, while along the southern it is only 4 miles.

The prominent characteristic of an extensive tract of country lying to the east of the Bay of Bengal is the succession of low

ranges of hills, which run in a south-easterly direction parallel to each other and to the coast-line. Chittagong District comprises a section of the three most westerly of these ranges, and of the four valleys intersected by them. The first of the ranges rises almost from the sea at the northern extremity of Maiskhāl island, of which it forms the backbone. It reappears at Cox's Bāzār on the east of the Maiskhāl channel in precipitous cliffs along the whole length of the coast, and terminates in the promontory of Teknaaf. The central range forms the Sītākund hills in the north of the District and, proceeding southwards, is named successively the Diyāng, Bānskhāli, and Garjania hills. But little of the eastern range is in Chittagong District, which it enters a few miles north of the Karnaphuli river, disappearing again into the Hill Tracts after forming the Patiā hills between the Karnaphuli and Sangu rivers. The low hills, clothed with luxuriant vegetation, and the winding rivers, meandering through verdant plains interspersed with groves of bamboos and betel-nut palms, combine to form a very pleasing panorama.

The rivers traverse the District in a south-westerly direction at right angles to the ranges of hills, the watershed lying in the higher hills of the more easterly ranges in the Hill Tracts. The most important rivers are the FENNY, which marks the northern boundary, the KARNAPHULI, near the mouth of which lies the town of Chittagong, the SANGU, and the MĀTĀMUHARI. The District is thus divided into valleys, running from north to south, which are bounded on the east and west by hills and on the north and south by rivers, each valley being drained by affluents of the said rivers. The tributaries of the Karnaphuli are the Ichāmatī, Sylok, Haldā, and Boālkhāli, while the Sangu receives the Dolu, Chāndkhāli, and Kumirā.

The hills are formed of sandstones and clays of the Upper Tertiary period; and the valleys have been filled by alluvial deposits of sand and clay, washed down from the hill-sides or dropped by the rivers when in flood. Geology.

Along the coast, and particularly on the low islands that fringe it, is found a scanty vegetation of *Ischaemum* and various other grasses and littoral or swamp-forest species. The lower hills that separate the river valleys are mainly covered with a shrubby jungle; the higher hills are clothed with a dense jungle largely composed of gigantic trees, among which the most conspicuous are various *gurjans* (*Dipterocarpus turbinatus*), but with which are associated many *Laurineae*, *Leguminosae*, Botany.

Rubiaceae, *Euphorbiaceae*, oaks and chestnuts, *Ternstroemiaceae*, *Meliaceae*, and *Urticaceae*. Palms are plentiful, and *Cycas* is abundant. *Casuarina equisetifolia* finds its natural northern limit in the extreme south of the District.

Fauna. The forest-clad hills swarm with game. Wild elephants ravage the eastern valleys, and bison are found in the northern hills. Tigers are frequently shot, and leopards, wild cats, and deer abound.

Temperature and rainfall. By reason of its position on the coast-line of the north-east angle of the Bay, towards which the moist winds of the south-west monsoon converge, the District is remarkable for its uniform temperature, high humidity, and heavy rainfall from May to October. Owing to the differences of elevation and the increasing height of the hills towards the east, the rainfall varies largely from place to place; and while at Cox's Bāzār it is 140 inches, at Chittagong it is only 105. For the whole District, the average fall is 111 inches, of which 11·5 inches fall in May, 22·5 in June, 28 in July, 21·4 in August, 11·6 in September, and 6·7 in October.

Cyclones. The District is especially liable to cyclones, and five very destructive storms have visited it during the last 110 years. On June 3, 1795, a severe gale blew from seven o'clock in the evening till past midnight. Heavy rain followed, the Collector's *kacheri* was totally unroofed, and only five brick-built houses survived in Chittagong town. Two years later a furious hurricane passed over the District. Two vessels lying at anchor in the port were sunk, and almost every native hut was levelled to the ground; several lives were lost. In October, 1872, a cyclone passed over the Cox's Bāzār subdivision, inflicting considerable damage; many lives were lost and numbers of cattle destroyed. The Backergunge cyclone and storm-wave of October 31, 1876, swept the sea-board with still more disastrous results. The inundation extended from 3 to 6 miles inland, and the damage was especially widespread in the neighbourhood of estuaries and the mouths of rivers. About 12,000 persons were drowned on this occasion, and 15,000 perished in the cholera epidemic that ensued. The cyclone of October 24, 1897, will long be remembered as the most disastrous on record. The hurricane reached its maximum intensity about midnight, when a series of storm-waves swept over the island of Kutubdiā and the villages on the mainland near the coast, drowning thousands of men and cattle, sweeping away homesteads, and destroying the standing crops. The loss of life by drowning was estimated at 14,000, and, owing to the pollution of the

water-supply, a severe epidemic of cholera broke out, which caused a further mortality of 18,000. The dikes along the sea-board were washed away, and immense injury was done to buildings in Chittagong town and throughout the District.

Chittagong originally formed part of the extensive Hindu kingdom of Tippera; but it was conquered by the Buddhist king of Arakan in the ninth century, and from that date onwards the Arakanese appear to have generally succeeded in retaining possession of the District. In the thirteenth century Chittagong was temporarily annexed to the Mughal empire, but the king of Tippera defeated the Muhammadans in 1512 and reconquered the country. Subsequently it again fell into the hands of the Mughals, and in 1538 a Portuguese mission from Goa to the governor of Bengal landed here; the latter, suspecting the intentions of the envoys, imprisoned them, and the Portuguese in revenge burnt the town. During the struggle for supremacy between the Mughals and Afghāns, between 1560 and 1570, Chittagong was reconquered by the king of Arakan and annexed to his kingdom as a tributary province; this fact, however, was ignored by the Mughals, and the District was assessed in 1582 by Todar Mal as an integral part of the empire. History.

In order to maintain their hold on the District the Arakanese, or Maghs as they are called in Bengal, imported a force of Portuguese outlaws, and made over to them the port of Chittagong as a pirate harbour. These renegades, who are generally known as Firinghīs, soon began to give trouble, and in 1605 they threw off their allegiance. Being driven out of Chittagong, they took refuge in the island of Sandwīp, from which coign of vantage they vied with their late masters in harrying the coasts of Bengal; and their depredations soon became so serious that, in 1608, the capital of the governor of Bengal was removed to Dacca that he might be better able to control the operations against them. In 1638 Matak Rai, who held Chittagong on behalf of the Rājā of Arakan, quarrelled with his master and sought the protection of the Mughals. He acknowledged himself the vassal of the Delhi empire and nominally made over the District to the governor of Bengal, who does not appear, however, to have taken effective possession. Meanwhile the depredations of the Maghs and Firinghīs had become intolerable, and in 1664–5 Shaista Khān, the governor of Bengal, dispatched a strong force against them. The expedition was a complete success; the ports at the mouth of the Meghnā and on Sandwīp island

were captured by the fleet, the Firinghīs were induced to desert the cause of the Rājā of Arakan, and the town of Chittagong was carried by storm (1666). It was thereupon reannexed to Bengal and the name was changed to Islāmābād, the 'residence of the Faithful.' Many of the Firinghīs were removed to Dacca, where their descendants still reside.

Twenty years afterwards (1685), the East India Company sent out an expedition under Admiral Nicholson, with instructions to seize Chittagong and fortify it on behalf of the English. This expedition proved abortive. Two years later the Court of Directors determined to make Chittagong the head-quarters of their Bengal trade, and Captain Heath was sent out with a fleet of ten or eleven ships to seize it; but when he reached Chittagong early in 1689, he found the place too strongly held, and abandoned the attempt. The District thus remained in the possession of the Mughals until 1760, when it was ceded to the East India Company along with Burdwān and Midnapore by the Nawāb Mīr Kāsim. The administration was placed in the hands of an English Chief with a council.

When Arakan was conquered by the Burmans in 1784, large numbers of its inhabitants fled to Chittagong. The Burmans demanded their surrender, and the refusal of the British to give them up was one of the causes that led to the first Burmese War. Repeated aggressions on the frontier culminated, in September, 1823, in the forcible seizure by the Burmans of the island of Shāhpuri at the mouth of the Naaf river, which had been for many years in the undisturbed possession of the British. In the war which ensued, a strong Burmese force, marching on Chittagong, surrounded and annihilated a British detachment of 300 sepoys with 2 guns at Rāmu, a few miles east of Cox's Bāzār. Before the Burmese commander could follow up his success, the setting in of the rains rendered the roads impassable; and soon afterwards, on the capture of Rangoon, the Arakan force was recalled.

During the Mutiny of 1857 three companies of the 34th Native Infantry stationed at Chittagong broke into mutiny on the night of November 18. They plundered the treasury, released the prisoners in the jail, murdered a native constable, and marched off, without molesting the residents, along the borders of Hill Tippera into Sylhet and Cāchār, where they were almost all killed or captured by the Sylhet Light Infantry (now the 10th Gurkha Rifles) and Kūki scouts.

The people.

The population of the District as now constituted increased from 1,127,402 in 1872 to 1,132,341 in 1881, 1,290,167 in

1891, and 1,353,250 in 1901. Owing to the cyclone of October, 1897, the growth of population during the last decade was only 4·9 per cent. Chittagong town is malarious, but elsewhere the climate is fairly healthy. The principal disease is fever, but cholera also claims its victims. Insanity is very prevalent.

The principal statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Chittagong .	1,596	1	1,217	1,153,081	722	+ 4·6	70,413
Cox's Bāzār .	896	1	233	200,169	223	+ 6·5	7,906
District total	2,492	2	1,450	1,353,250	543	+ 4·9	78,319

The towns are CHITTAGONG, the head-quarters, and COX'S BĀZĀR. More than a third of the District (851 square miles) is covered by hill and jungle, and the density in the inhabited area is 825 persons per square mile, rising to 1,629 in the *thāna* of Chittagong. Since the cyclone of 1897 many of the old Magh immigrants seem to have returned to Arakan. There is also a large temporary exodus thither of harvesters, boatmen, and coolies; and it was owing to their absence at the time of the Census of 1901 that Chittagong alone, of all the Eastern Bengal Districts, showed a preponderance of females over males. Of the people, 98 per cent. speak a corrupt dialect of Bengali, known from the name of the District as Chatgaiyā; the Maghs speak a kind of Burmese. No less than 72 per cent. of the population are Muhammadans. Most of these are local converts or their descendants, but there are also a number of foreigners whose ancestors formed part of the invading army of 1666. The proportion of Hindus (24 per cent.) is lower than in any Eastern Bengal District except Bogra and Rājshāhi.

Castes and occupations.

The majority of the Muhammadans call themselves Shaikhs, but 9,000 claim to be Saiyids and 2,000 Pathāns. The Buddhists (65,000) are nearly all Maghs, who are either pure Arakanese, or the offspring of Bengali fathers and Arakanese mothers; the latter are known as Barua Maghs. Among Hindus the Kāyasths (71,000), are the most numerous caste; many of them, and of the Baidyas (7,000), are the descendants of revenue officials employed by the early Arakanese, Musalmān, and British rulers. Many of the Sūdras (58,000) occupy a quasi-servile position, and hold their lands for services

rendered. The weaving caste of Jugis has 35,000 representatives. Brāhmans (24,000) congregate in the neighbourhood of the famous shrines of Sītākund and Adināth. Only 60 per cent. of the population are dependent on agriculture, by far the lowest proportion in Eastern Bengal.

Christian missions.

The number of Christians (1,237) is swollen by the inclusion of the Firinghī community at Chittagong, who are Roman Catholics. The number of native Christians is only 49. There is a very old Catholic church with a convent, where Firinghī boys and girls are educated; the church owns some landed property in the District. A Baptist missionary is also at work and has made a few converts.

General agricultural conditions.

Except on the hills, the soil is everywhere alluvial, consisting of a mixture of clay and sand. In the neighbourhood of the sea-shore and within the reach of the tides stiff clay predominates; this is the least fertile soil in the District, and is rapidly exhausted. Farther inland the drainage from the hills sweeps down quantities of sand, and the admixture of this with the alluvial clay forms the fertile loam which is the prevailing soil of the District. The hill streams are also heavily charged with organic matter from the decaying vegetation in the hills, and the silt which their waters deposit acts like manure and enables a rich succession of crops to be harvested. On low land winter (transplanted) rice is the main crop; it is often followed by a catch-crop of pulses. Higher lands yield a double rice crop, the earlier being harvested in August, and the later in December. Round the homesteads tobacco, chillies, the *pān* creeper, sugar-cane, and vegetables are grown; and on the river banks and sandy flats hemp, tobacco, melons, and pumpkins luxuriate. The sandy hills grow nothing but thatching-grass. All along the coast-line, and up the creeks within reach of tidal water, embankments are necessary to exclude the salt water, which is fatal to rice cultivation.

Chief agricultural statistics and principal crops.

The chief agricultural statistics for 1903–4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.	Forests.
Chittagong .	1,596	764	161·5	237
Cox's Bāzār .	896	153	0·3	49
Total	2,492	917	161·8	286

Less than half the total area (including forests) is fit for cultivation; the uncultivable area comprises the sandy hills

which traverse the District and the deltaic scrub forests in the south.

By far the most important crop is winter rice, which occupies three-fourths of the cultivated area; early rice, including the early irrigated (*panya*) variety, is grown on a fifth of the cropped area. Hemp thrives on the banks of the Sangu and in the neighbourhood of Sītākund, but jute is only a garden crop; good tobacco is cultivated in the Mātāmuhari valley. Tea is grown on 4,000 acres belonging to seventeen gardens. Most of the estates were purchased in fee-simple about forty years ago, and are situated on the low hills which are unfit for rice cultivation. Thatching-grass covers about 36 square miles of the hilly slopes; it does not require much cultivation, though the weeding is troublesome.

Improvements in agricultural practice. The cultivated area has increased by 18 per cent. in the last sixty years, and in the more remote parts the scrub jungle is still being cleared; in the deltaic country in the south reclamation is also spreading. A model farm has recently been opened near Chittagong town. Loans are rarely taken, but after the cyclone of 1897 1·2 lakhs was advanced for the restoration of the embankments which had been breached by the storm-wave.

Cattle. The breeds of cattle are poor; the most valuable are buffaloes, which find abundant grazing in the forests and on the river flats. Pasture abounds in most parts, but in the highly cultivated central valleys it is scarce so long as the rice crop is on the ground.

Irrigation. The early spring rice crop is generally irrigated by damming a hill stream. Rice seedling-beds are watered from tanks and ditches; and sugar-cane, chillies, the *pān* creeper, and vegetable crops are irrigated in the same way.

Fisheries. Deep-sea fishing is practised in the Bay, the catch being dried on shore and sold in large quantities. Every river, tank, and ditch swarms with fish, which are caught in every variety of net and trap, and form an important item in the diet of the people. At Cox's Bāzār excellent pomfret, soles, and oysters are to be had.

Forests. Nearly one-third of the District is covered by forests, and an area of 286 square miles has been 'reserved.' The most valuable trees are the *tūn* (*Cedrela Toona*), *gurjan* (*Dipterocarpus turbinatus*), *jārul* (*Lagerstroemia Flos Reginae*), *nāgeswar* (*Mesua ferrea*), *gamhār* (*Gmelina arborea*) and *chāplās* (*Artocarpus Chaplasha*). Canes and bamboos grow luxuriantly everywhere and are the most valuable produce of the forests, and a quantity of firewood is cut on the islands in the delta of

the Mātāmuhari. In 1903-4 the receipts of the Forest department amounted to Rs. 15,000.

Arts and manufactures.

Tea is the only important manufacture; the out-turn in 1903 was 1,370,000 lb. Coarse cloth is woven in Pahārtali, and the Magh women of Cox's Bāzār make silk and cotton *lungīs* or kilts; but both industries are decaying. Bamboo mats and baskets and fishing-nets are manufactured for local use, and fine mats are woven of a reed known as *sītalpāti* (*Phrynium dichotomum*) and are to some extent exported. Chittagong was formerly famous for its ship-building, but the industry is moribund; only three vessels were built in 1901-2 and none since that year. There is a rice mill at Chittagong.

Commerce.

The trade of the port is dealt with in the article on CHITTAGONG TOWN. The chief exports are jute (sent from Nārāyanganj), rice husked and unhusked (mainly from Noākhāli and Tippera), and tea (from Assam). Cotton is also brought down from the Hill Tracts and exported. The imports, in addition to the items which are re-exported, are piece-goods, metals, sugar, salt, and oil. The chief centres of trade in the interior are Cox's Bāzār, Teknaaf, Mahājan's Hāt on the borders of Noākhāli, and Nāzir's Hāt on the Haldā river.

Railways and roads.

The Assam-Bengal Railway, which was opened for passenger traffic in 1895, traverses the District for nearly 50 miles before it crosses the Fenny and passes into Noākhāli. The branch line from Lākshām westwards to Chāndpur establishes communication with Calcutta, by means of the India General Steam Navigation Company's steamers to Goalundo and the Eastern Bengal State Railway, the journey occupying 24 hours. Excluding 345 miles of village tracks, there are 533 miles of roads maintained by the District board; but, with the exception of only 3 miles, the roads are all unmetalled, and very imperfectly bridged. The Dacca trunk road is maintained by the District board, and is bridged as far as the Fenny river (45 miles), which is crossed by a ferry. The Rāmgarh road runs north-east to the border of the District, the Hill Tracts road branching east from it at Hāthazāri. The Arakan road runs due south to Akyab; the Rāmu road leaves it at the 58th mile and connects with Ukhiā Ghāt on the Naaf estuary, and another branch runs to Cox's Bāzār. The Chāndpur road is more or less parallel to, and west of, the Arakan road, which it joins at the 38th mile; and the Jaldi road, which is still unfinished, is intended to connect Chāndpur with the Arakan road.

South of the Karnaphuli the traffic is carried almost entirely by water, the main rivers being connected by north and south cross-channels, which are partly artificial and are maintained by the District board. By these waterways inland communication can be had at all seasons from Chittagong southwards to Cox's Bāzār. The commonest boat is the *saranga*, a covered dug-out sometimes enlarged by side-planks, carrying up to 4 tons burden; the *balām* carries up to 10 tons, and the *gadu* as much as 22 tons. Chittagong is connected with Calcutta and Rangoon by coasting steamers of the British Indian and Asiatic Steam Navigation Companies' lines. Two steamers ply to Cox's Bāzār, and one steamer runs weekly to Rāngāmāti in the Chittagong Hill Tracts. Water communications.

For administrative purposes the District is divided into two subdivisions, with head-quarters at CHITTAGONG and COX'S BĀZĀR. The District Magistrate is assisted by 13 stipendiaries, of whom 5 are employed as *khās tahsīldārs*. Cox's Bāzār subdivision is in charge of a European Deputy-Magistrate. The District staff also includes an Inspector of schools, a Deputy-Conservator of forests, and an Executive Engineer. District subdivisions and staff.

The District and Sessions Judge is assisted in the disposal of civil work by two Subordinate Judges and sixteen Munsifs. The criminal courts include those of the Sessions Judge, the District Magistrate, and his assistants. The chief crimes are arson, forgery, perjury, fabrication of documents, and personation. Civil and criminal justice.

The revenue history of Chittagong, which is long and complicated, has been fully dealt with in the Settlement Report published in 1900; all that can be attempted here is to furnish an outline of the present position and to explain as briefly as possible how it arose. The District as a whole has never been permanently settled. The British occupation was almost immediately followed by the rough survey of 1764, the only one of its kind made at that time in Bengal, and this embraced all the land then occupied. The total area measured was 609 square miles, of which 575 square miles were included in various estates, and 34 square miles belonged to the Jaynagar grant. When the Decennial Settlement was made in 1790, the measurement papers of 1764 were used as the basis of the assessment, and consequently nothing was permanently settled except the area of 575 square miles referred to above. According to the recent survey of 1898, these permanently settled estates comprise an area of 713 square miles, or two-sevenths of the District, the difference of 138 square miles being due Land revenue.

mainly to under-measurement in 1764. The remaining five-sevenths are styled in local parlance *noābād*, or 'newly reclaimed land.' Of the permanently settled area of 575 square miles measured in 1764, about 417 square miles were included in revenue-paying estates, being assessed at 4·95 lakhs, and 158 square miles in revenue-free estates. Many of the latter were resumed and assessed to revenue in 1848, and the revenue-free area is now only 89 square miles, while the permanently settled revenue-paying estates measure 624 square miles and pay a revenue of 5·30 lakhs. The Jaynagar grant was conferred in 1763 subject to periodical remeasurement and reassessment; it escheated in 1796, because the proprietor set up an unfounded claim under a forged grant. In 1815 the Court of Sadr Dīwāni Adālat held that the escheat was illegal, and ordered restitution, which was eventually made in 1848. The term of lease expired in 1902, and the revenue was then raised from Rs. 9,000 to Rs. 13,000 for an area of 38 square miles. The proprietors refused to accept the settlement, and the estate was taken under Government management; it was subsequently restored to them at the increased revenue, pending the decision of their claim that it is a permanently settled estate. An area of 751 square miles has now been accounted for; an additional area of 447 square miles was given out in 1848 under temporary leases. Part of this had been usurped by the proprietor of the Jaynagar grant under his forged grant prior to 1796; this was settled in 1848 direct with the persons in possession, who were styled *talukdārs*. In the same year other state lands, which had been encroached upon by the proprietors of permanently settled estates and their tenants, were separated from the estates claiming them, and settled with the occupants for terms of either twenty-five or fifty years, and lands which had been reclaimed by squatters were similarly dealt with. The aggregate assessment on these two classes of estates was 2 lakhs. When the shorter leases fell in, the *taluks* concerned were resettled at enhanced rentals up to 1898, by which date the longer terms had also expired, and a general resettlement was effected on the basis of a regular survey and scientific assessment which had been carried out during the previous six years. At the same time, all new reclamations were settled with the occupants. Excluding Jaynagar, the total area thus brought under settlement in 1898 was 515 square miles, which was assessed until 1925 at 6 lakhs. About 65 square miles have been sold under the Waste Lands rules for tea cultivation, and 2 square miles have been acquired

by the Assam-Bengal Railway; the area not included in any of these categories is still at the disposal of the state.

It must not be supposed from this brief summary that each of the classes of estates is homogeneous or is clearly defined from the others. On the contrary, the fields of permanently settled estates and of *taluks* held under temporary leases are interlaced on the ground like squares on a chess-board, and the correct classification of each field according to the particular estate to which it belongs is a task of enormous difficulty. The temporarily settled estates number no less than 80,000; 34,500 are *taluks*, and the occupants have a right to resettlement in 1925 at such rents as Government may then fix; 500 are *ijāras* or farms, which carry no such right; and 45,000 are *ryoti* holdings pure and simple. All these temporary holdings are grouped with reference to locality into five Government estates, each of which is managed by an officer styled a *khās tahsīldār*; their head-quarters are at Chittagong, Cox's Bāzār, Sātkaniā, Patiā, and Raojān, and their principal duty is the collection of the rents. The permanently settled estates number 28,636.

The total land revenue demand is equivalent to 35 per cent. of the gross rental of the District, and the incidence on each cultivated acre is Rs. 1-13-7, as compared with only R. 0-13-2 in Noākhāli and R. 0-14-9 in Tippera. Rents are very high, partly because the land is fertile and the pressure of population on the cultivated area is great, and partly because of the large remittances made to the District by persons employed elsewhere. The average rates per acre vary for the different classes of tenants: ryots holding at fixed rates pay Rs. 4-4 per acre; settled ryots, Rs. 5-11-2; occupancy ryots, Rs. 4-10-6; non-occupancy ryots, Rs. 4-8-3; and under-ryots, Rs. 6-8-6.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	8,02	9,45	11,12	11,70
Total revenue . . .	14,71	17,00	20,32	21,82

Outside the two municipalities of CHITTAGONG and COX'S BĀZĀR, local affairs are managed by a District board, which expends about 2 lakhs annually, mainly derived from the road cess rates and a contribution from Provincial revenues. In 1903-4 the income amounted to Rs. 1,96,000, of which Local and municipal government.

Rs. 77,000 was derived from rates; and the expenditure was Rs. 1,83,000, including Rs. 85,000 on public works and Rs. 40,000 on education.

Public works. There are lighthouses at Kutubdiā and Norman's Point. The Government embankment at Kutubdiā, which was destroyed by the storm-wave of 1897, has been repaired; and a Government dike protects part of the coast-line.

Police and jails. The District contains 13 *thānas* or police stations and 20 outposts. The force under the District Superintendent numbers 3 inspectors, 36 sub-inspectors, 36 head constables, and 426 constables, in addition to a rural police of 215 *daffadārs* and 2,446 *chaukīdārs*. The District jail at Chittagong town has accommodation for 203 prisoners, and a subsidiary jail at Cox's Bāzār for 20.

Education. In respect of education the District is very progressive. In 1901, 5·8 per cent. of the population (11·7 males and 0·5 females) could read and write. The total number of pupils under instruction increased from 46,184 in 1892–3 to 57,205 in 1900–1; and 57,844 boys and 7,723 girls were at school in 1903–4, being respectively 60·1 and 7·2 per cent. of those of school-going age. The percentage for boys was the highest in Bengal, and that for girls higher than elsewhere outside Calcutta. The total number of educational institutions, public and private, in 1903–4 was 1,987: namely, one Arts college, 59 secondary schools, 1,138 primary schools, and 789 special schools. The expenditure on education was 1·9 lakhs, of which Rs. 40,000 was met from Provincial funds, Rs. 39,000 from District funds, Rs. 1,500 from municipal funds, and Rs. 90,000 from fees. The principal educational institution is the Arts college in Chittagong town.

Medical. In 1903 the District contained 13 dispensaries, of which 3 had accommodation for 60 in-patients. In all, 137,000 out-patients and 800 in-patients were treated during the year, and 4,000 operations were performed. The expenditure was Rs. 29,000, of which Rs. 10,000 was contributed by Government, Rs. 15,000 was derived from Local and Rs. 3,000 from municipal funds, and Rs. 8,000 from subscriptions.

Vaccination. Vaccination is compulsory only within municipal areas; but 62,000 persons, or 47 per 1,000 of the population, were vaccinated in 1903–4, compared with a ratio of 34 per 1,000 for Bengal.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. vi (1876); Sir H. J. S. Cotton, *Revenue History of Chittagong* (Calcutta, 1880); Geddes, *Report on Chittagong Tenures*

(Calcutta, 1868); *Selections from the Records of the Government of Bengal on the Settlement of Noābād Lands in Chittagong* (Calcutta, 1877–1900), 6 vols.; C. G. H. Allen, *Settlement Report* (Calcutta, 1900); L. S. S. O'Malley, *District Gazetteer* (Calcutta, 1908).]

Chittagong Subdivision.—Head-quarters subdivision of Chittagong District, Eastern Bengal and Assam, lying between 21° 51′ and 22° 59′ N. and 91° 30′ and 92° 13′ E., with an area of 1,596 square miles. The subdivision consists of a long strip of land between the sea and the hills, divided in the centre by the Sītākund hills, and bordered on the north and south by the ranges of Hill Tippera and the Chittagong Hill Tracts. The population in 1901 was 1,153,081, compared with 1,102,161 in 1891. It contains one town, CHITTAGONG (population, 22,140), the head-quarters; and 1,217 villages. The density is 722 persons per square mile, compared with 223 in Cox's Bāzār and 543 for the whole District. The only important place besides Chittagong town is SĪTĀKUND.

Cox's Bāzār Subdivision.—Subdivision of Chittagong District, Eastern Bengal and Assam, lying between 20° 35′ and 21° 56′ N. and 91° 49′ and 92° 23′ E., with an area of 896 square miles. The subdivision comprises a long narrow strip of coast valleys and low ranges of hills, and the islands of Maiskhāl and Kutubdiā. The population in 1901 was 200,169, compared with 188,006 in 1891. The subdivision is sparsely inhabited, the density being only 223 persons per square mile, against 543 for the whole District. It contains one town, COX'S BĀZĀR (population, 3,845), the head-quarters; and 233 villages. Almost the whole subdivision is included in a Government estate. The only noteworthy place is SHĀHPURI Island, the scene of the outbreak of 1823 which led to the commencement of the first Burmese War.

Chittagong Town.—Head-quarters of the Division and District of the same name in Eastern Bengal and Assam, situated in 22° 21′ N. and 91° 50′ E., on the right bank of the Karnaphuli river, 12 miles from its mouth. The population in 1901 was 22,140, of whom 13,513 were Muhammadans, 7,209 Hindus, 873 Christians, and 422 Buddhists. The history of the town has been narrated in the article on CHITTAGONG DISTRICT. It was constituted a municipality in 1864. The income during the decade ending 1901–2 averaged Rs. 58,000, and the expenditure Rs. 51,000. In 1903–4 the income was Rs. 69,000, including Rs. 20,000 derived from a tax on houses and lands, Rs. 12,000 from a conservancy

rate, Rs. 4,000 from a tax on vehicles, and Rs. 4,000 from tolls, while Rs. 7,000 was received as fees from educational institutions. The incidence of taxation was Rs. 1-13-5 per head of the population. In the same year the expenditure was Rs. 55,000, the chief items being Rs. 1,000 spent on lighting, Rs. 15,000 on conservancy, Rs. 9,000 on medical relief, Rs. 6,000 on roads, and Rs. 8,000 on education. Water is supplied through pipes from a reserved tank to Bakshir Hāt, the commercial quarter.

Chittagong was already an important place of trade in the sixteenth century, when the Portuguese merchants gave it the name of Porto Grando; and it is still the principal port in the Province. The construction of the Assam-Bengal Railway has made it the natural outlet for the trade of Assam and part of Eastern Bengal. The chief business is the export of jute, which is baled at Nārāyanganj and either shipped thence by steamer to Chāndpur and railed to Chittagong or dispatched direct in brigs to that port. Piece-goods, salt, and kerosene oil are imported, and rice, tea, and hides are the principal exports. The total value of the exports in 1903-4 was 316·7 lakhs, including jute (109·2 lakhs), tea (102·4 lakhs), and rice (23·6 lakhs). The value of the imports in the same year was 76·1 lakhs, including salt (2·3 lakhs), and machinery and railway plant (7·2 lakhs). A steamer jetty has been built, and a second is under construction. The town contains numerous public buildings, including the church, a fine range of Government offices, the general hospital, and railway offices. The jail has accommodation for 203 prisoners. The Chittagong College teaches up to the F.A. standard of the Calcutta University, and in 1901 had 428 pupils on the rolls. There is also an important *madrasa* for Muhammadan students. Chittagong is the terminus of the Assam-Bengal Railway, and extensive workshops are situated at Pahārtali, a suburb of the town. It is also the head-quarters of the Commissioner of the Division, of the Assam-Bengal Railway Volunteer Rifles, who number 276, and of a detachment of the Eastern Bengal Volunteer Rifles, including a mounted section.

Cox's Bāzār Town.—Head-quarters of the subdivision of the same name in Chittagong District, Eastern Bengal and Assam, situated in 21° 27′ N. and 91° 59′ E. Population (1901), 3,845. The town is named after Lieutenant Cox, who in 1799 was appointed to supervise the Arakanese fugitives then seeking shelter in British territory after the conquest of Arakan by the Burmans; two-thirds of the population are

descendants of these refugees. Cox's Bāzār was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 5,000, and the expenditure Rs. 4,000. In 1903–4 the income was Rs. 5,300, mainly derived from a tax on persons (or property tax) and from tolls; and the expenditure was Rs. 5,000. The Arakanese weave silk *lungīs* or kilts, but the town is decadent, and the industry is languishing. The town contains the usual public offices; the sub-jail has accommodation for 20 prisoners.

Shāhpuri.—Island in the Naaf estuary in the Cox's Bāzār subdivision of Chittagong District, Eastern Bengal and Assam, situated in 20° 38′ N. and 92° 19′ E., on the border of Arakan. In 1823 the Burmans claimed possession of the island, and overpowered a British guard stationed upon it, but they were afterwards driven out. A second attempt led to the commencement of the first Burmese War.

Sītākund.—Village in the head-quarters subdivision of Chittagong District, Eastern Bengal and Assam, situated in 22° 38′ N. and 91° 39′ E., 24 miles north of Chittagong town. Population (1901), 1,329. It gives its name to a range of hills running north from Chittagong town, which reaches its highest elevation (1,155 feet) at Sītākund. In the vicinity are the famous temples of Sambhunāth, Chandranāth, Labanakhya, and Bārabakund, which are picturesquely situated on hill-tops or in romantic glens, and are visited by pilgrims from all parts of Bengal. The largest gathering takes place at the Siva Chaturdasi festival, when some 20,000 pilgrims assemble. The Purī Lodging-House Act is in force, and a good supply of drinking-water is provided. A feature of the locality is the inflammable gas which issues from crevices in the rocks. There are some Buddhist remains which are held sacred by the hillmen.

Chittagong Hill Tracts.—A frontier District in the Chittagong Division of Eastern Bengal and Assam, lying between 21° 11′ and 23° 47′ N. and 91° 41′ and 92° 42′ E., with an area of 5,138 square miles. It is bounded on the north by the State of Hill Tippera; on the west by Chittagong District; on the south by Arakan; and on the east by the Northern Arakan District of Burma and the Lushai Hills District of Assam.

Boundaries, configuration, and hill and river systems.

Between the plains of Bengal and those of Upper Burma stretches a hilly tract of primaeval forest, bounded on the north by the State of Hill Tippera and by Assam, and on the south by the Burmese province of Arakan. A succession of hill ranges runs from north-west to south-west, determining the

geographical and ethnical division of the whole country into three oblong strips, of which the most westerly is known as the Chittagong Hill Tracts; the central strip constitutes the LUSHAI HILLS, and the eastern the Chin Hills, which form part of Upper Burma.

The general aspect of the District is a tangled mass of hill, ravine, and cliff, covered by dense tree, bush, and creeper jungle. The mountains are steep, and can only be ascended slowly and painfully along narrow zigzag paths through the jungle. The highest hills are Keokrādang (4,034 feet) on the watershed of the Rankhiang river, and Pyramid hill (3,017 feet).

The principal rivers are the FENNY, KARNAPHULI, SANGU, and MĀTĀMUHARI. The Karnaphuli and Fenny flow transversely across the main lines of the hills and have no regular valleys; but the reverse is the case with the Sangu and Mātāmuhari rivers, which run parallel to the ranges, until they debouch in the plains, and also with the two main tributaries of the Karnaphuli, the Kāsālang and Chingri, which do the same. These rivers are of great depth during the rains; but the rapidity and violence of their currents and their sharp turns and whirling eddies render them unnavigable by large craft within the limits of the District, and present considerable dangers to small boats. In addition to these rivers, there is a network of hill streams, on which canoes alone are able to ply, and these only in parts. A mountain lake of great beauty is situated on the east of the Rāmakrī Tang hill; it is about a mile long by a quarter of a mile broad, and is well stocked with fish.

Geology. The District has not been geologically explored, but so far as is known the rocks belong to the Upper Tertiary period.

Botany. The hills are covered with *Laurineae*, *Dipterocarpeae*, *Ternstroemiaceae*, *Euphorbiaceae*, and *Leguminosae*. A list of the principal trees will be found in the section on Forests. There are many kinds of bamboos, including *Bambusa Tulda*, *vulgaris*, *arundinacea*, and *auriculata*, as well as *Melocanna bambusoides*, *Teinostachyum Dullooa*, and others. Canes of various species, *kurujpat* (*Licuala peltata*), and a thatching-grass known as *san* (*Imperata arundinacea*) are common products. Orchids and ferns grow everywhere in great variety and profusion.

Fauna. The forests afford an asylum to numerous wild animals, including elephants, tigers, leopards, both ordinary and clouded (*Felis nebulosa*), rhinoceros, bison, three kinds of bear—the Himālayan black bear (*Ursus torquatus*), the sloth bear (*Melur-*

sus ursinus), and the Malayan bear; and three kinds of deer—the *sāmbar*, *chītal*, and barking-deer. The rivers swarm with fish, and excellent mahseer fishing is to be had in their upper reaches.

The climate is cool, but the valleys are unhealthy in September. The rainfall is very heavy, averaging 94 inches for the whole District. December and January are the only dry months; 19 inches fall between February and May, and an average of 18 inches monthly from June to August, while there are 11½ inches in September, 6½ inches in October, and nearly 2 inches in November. Climate and rainfall.

The history of the Chittagong Hill Tracts is a record of constantly recurring raids on the part of the eastern hill tribes, and of the operations undertaken to repress them, of which a full narrative will be found in the article on the LUSHAI HILLS. It will suffice to say here that the earliest mention of these raids is to be found in a letter from the Chief of Chittagong to Warren Hastings, the Governor-General, dated April 10, 1777, complaining of the violence and aggressions of a mountaineer named Rāmu Khān, the leader of a band of Kūkis or Lushais; and that they continued without any long intermission down to 1891, when the Lushai Hills were annexed to British territory. History.

The recorded population increased from 69,607 in 1872 to 101,597 in 1881, 107,286 in 1891, and 124,762 in 1901. The Census of 1872 was, however, very imperfect, and the actual growth of population has probably not exceeded what might be expected in a sparsely inhabited but fairly healthy tract. There is a large amount of insanity, and the proportion of persons mentally afflicted amounts to 1·3 per 1,000 of the population. The people.

Statistics of the Census of 1901 are shown in the following table. There are no regular subdivisions, and the separate areas represent the circles or jurisdictions of the three chiefs, whose functions are described below under Administration:—

Circle.	Area in square miles.	Number of villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Chakmā	2,421	94	48,789	20	+ 7·1	3,290
Mong	653	128	31,898	49	+ 40·4	597
Bomong	2,064	74	44,075	21	+ 12·9	1,689
District total	5,138	296	124,762	24	+ 16·3	5,576

There are no towns, and 211 of the villages have a population of less than 500, while that of only one exceeds 2,000. The head-quarters of the District are at RĀNGĀMĀTI. If the area of 1,385 square miles of uninhabited forest Reserves be deducted, the density is 33 persons per square mile. There is a little immigration from Chittagong, and a few persons have emigrated to Hill Tippera. The proportion of females to every 100 males is only 90 in the District-born, and 83 in the total population. Buddhists numbered 83,000, Hindus 36,000, and Musalmāns 5,000. The Chakmās speak a corrupted Bengali; the Maghs, Arakanese, a dialect of Burmese; and the Tipperas a language of their own which is akin to Kachārī.

Castes and occupations. The most important tribes are the Chakmās, who number 44,000; the Maghs, 35,000; and the Tipperas, 23,000: between them they account for nine-tenths of the population. The Chakmās are a Mongoloid race, probably of Arakanese origin, though they have intermarried largely with Bengalis. They are divided into three sub-tribes—Chakmā, Doingnak, and Tungjainya. The Doingnaks broke away from the main tribe a century ago and fled to Arakan; of late years some have returned to the Cox's Bāzār subdivision of Chittagong District. The Tungjainyas immigrated from Arakan as late as 1818, and spoke Arakanese until recently. Child-marriage is unknown, and divorce and remarriage of widows are permitted. The Chakmās occupy the central and northern portions, or rather less than half of the District; they burn their dead and offer invocations to spirits. The Maghs, as the Bengalis call the natives of Arakan, are found chiefly in the southern circle, under the sway of the Bomong chief; they are, for the most part, the descendants of Arakanese who fled hither when their own country was overrun by the Burmans in 1784. They are divided into three sections. The Jhūmia, or cultivators of *jhūms*, a term which will be described later, regard themselves as the aborigines of the Hill Tracts, as contrasted with the Roang or Arakan Maghs, while the Barua or Rājbansi Maghs have intermarried with Bengalis. It is the last-named group from which the well-known Magh cooks are recruited. The Tipperas, who are found chiefly in the Mong circle, are described in the article on the HILL TIPPERA State, which is their home. The Chakmās and Maghs are Buddhists, while the Tipperas are Hindus. No less than 66,000 persons with 43,000 dependants are engaged in nomadic agriculture, and 10,000 are plough cultivators.

There were only 252 Christians in 1901, of whom 248 were

natives; the Baptist Missionary Society has a centre at Rāngā-māti, but the number of converts is very small. Christian missions.

General agricultural conditions.

The District consists largely of hills, which are unsuitable for plough cultivation, and the slopes cannot be terraced, as they are in the Himālayas, for want of stones for revetment. A great part of the total area is thus unsuitable for plough cultivation, and the only feasible method of tillage is that known as *jhūm*, which is practised under different names all over India wherever the conditions are similar. In the months of January and February a convenient piece of forest land is selected; the bamboos are cleared and the smaller trees felled, but large trees are only denuded of their lower branches; the cut jungle is then allowed to dry in the sun, and in April it is fired. If it has thoroughly dried and no rain has fallen since the *jhūm* was cut, this firing reduces all but the largest trees to ashes, and burns the soil to the depth of an inch or two. The ground is then cleared of charred logs and débris; and as soon as heavy rain falls and saturates the ground, the *jhūm* is planted with mixed seeds of cotton, rice, melons, cucumber, pumpkins, yams, and maize. The method of sowing is very primitive: the seeds are mixed in a basket, and the sower makes a small hole in the ground with a *dao* or chopper and drops in the mixed seeds. The maize ripens about the middle of July; the melons, vegetables, and grain are harvested in September, and the cotton in October and November. This method of cultivation entails great labour and incessant care; the young plants have to be constantly weeded and guarded against the depredations of wild hog, deer, monkeys, and parrots. Moreover, the system is a very wasteful one, as the same *jhūm* cannot be cultivated two years in succession, and the land takes from seven to ten years to recover. The out-turn is very uncertain, but from a successful *jhūm* the returns are very large—as much as three or four hundred-fold being occasionally obtained. Efforts are being made, with a fair measure of success, to induce the people to abandon *jhūming* in favour of plough cultivation, for which there is still plenty of suitable land lying waste in the valleys along the course of some of the larger rivers.

Principal crops.

Rice is the staple crop; cotton is also grown for export; sesamum is important, and a little tea is cultivated. No agricultural statistics are available. Persistent efforts have been made by Government to encourage the hillmen to settle down to plough cultivation, wherever this is practicable; and that some success has been attained is shown by the fact that the

rental of such lands has increased during the last six years from Rs. 10,000 to Rs. 16,000. The area under the plough now extends to nearly 14,500 acres; three-quarters of it grow rice and one-fifth mustard. The growth of cotton and *til* is also on the increase.

Forests. In addition to the 'unclassed' forests, the area of which amounts to 3,753 square miles, 'reserved' forests cover 1,385 square miles, or more than a quarter of the District. They are divided into five Reserves: namely, the Kāsālang (763 square miles), Rankhiang (215 square miles), Sītāpahār (11 square miles), Mātāmuhari (251 square miles), and Sangu (145 square miles). The forests contain valuable timber and bamboos; the most useful trees are the *jārul* (*Lagerstroemia Flos Reginae*), *tūn* (*Cedrela Toona*), *gamhār* (*Gmelina arborea*), *chāplās* (*Artocarpus Chaplasha*), and *gurjan* (*Dipterocarpus turbinatus*). In 1903–4 the receipts of the Forest department amounted to Rs. 88,000.

Arts and manufactures. Cotton cloth is woven by the hill-women for home consumption. Dug-outs are made and exported in considerable numbers to Chittagong and Noākhāli, where they are shaped into *sarangas*, or built up into *bālām* boats. The timber generally selected is *chāplās* or *gamhār*. The dimensions of these dug-outs vary from a small canoe, 18 feet long and 2½ feet broad, to big *sarangas*, 60 feet by 8; and their price ranges from Rs. 10 to Rs. 700. Tea is manufactured on one estate, which yielded an out-turn of 19,000 lb. in 1903. *Daos* and axe-heads are made in the winter by immigrant blacksmiths from Monghyr and elsewhere.

Commerce. Cotton is the principal article of export; 69,000 maunds were exported in 1903–4. Rice, sesamum seed, and a little mustard seed and tobacco form the remaining staples. There is a small import of piece-goods, rice, salt, tobacco, and dried fish. The trade is principally in the hands of Bengalis, and is carried on by water with Chittagong. The chief centres are at BĀNDARBAN, Chandraghonā, Rankhiang, RĀNGĀMĀTI, Subalong, BARKAL, Mahālcharī, and Ajodhyā.

Means of communication. The rivers are the principal means of communication, but the interior is being gradually opened up by roads. The District contains 230 miles of unmetalled roads, but these are only bridle-paths and are not passable for carts. The most important connect Rāngāmāti with Chittagong and with Demāgiri in the Lushai Hills; the former is bridged throughout, but the latter is a fair-weather track only. Bridged bridle-paths are under construction from Rāngāmāti to Mahālcharī, from Bān-

darban to Poãng's Hāt, and from Bāndarban to Chandraghonā. A Government steamer plies weekly on the Karnaphuli river from Chittagong to Rāngāmāti, a distance of 65 miles. A tramway has been constructed at Barkal to enable travellers to avoid the rapids in the Karnaphuli.

Administration.

The Hill Tracts formed part of Chittagong District until 1860, when they were separated from Chittagong and placed under an officer called the Hill Superintendent. Seven years later his functions were enlarged, and he was styled the Deputy-Commissioner of the Hill Tracts. In 1891, after the annexation of the Lushai Hills, the tract lost much of its importance, and was reduced to the status of a subdivision in charge of an Assistant Commissioner immediately subordinate to the Divisional Commissioner. In 1900 it was again formed into a District by Regulation I of that year, and the old designation of Superintendent was restored to the officer in charge. The boundaries were revised, and a strip on the east, including Demāgiri with a population of about 1,500, was transferred to the Lushai Hills. The District was at the same time divided into the Chakmā, Mong, and Bomong circles, each of which was placed under the jurisdiction of its own chief, who was made responsible for the collection of the revenue and for regulating the internal affairs of his villages. The Chakmā circle occupies the centre and north of the District, the Bomong circle is in the south, and the Mong circle in the north-west. A headman is in charge of each village; he collects the revenue and receives a commission on his collections. The migration of ryots from one circle to another is discouraged as much as possible.

Civil and criminal justice.

The ordinary codes of civil and criminal procedure are quite unsuited to the requirements of the primitive inhabitants of this remote tract, and the administration of justice is carried on in accordance with a few simple rules framed under Regulation I of 1900. Petty cases are dealt with by the village headman and the three chiefs, subject to the general control and supervision of the Superintendent and his two assistants, who hear appeals from their orders and themselves try all important cases and suits. The Commissioner of the Division exercises the powers of a Sessions Judge and also of a High Court, except in the case of sentences of death, which require the confirmation of the Local Government.

Revenue.

In former times the only revenue obtained from the District consisted of a capitation or *jhūm* tax, which in 1846-7 yielded Rs. 11,800. Since 1867 revenue has also been derived from

the forests and from the lease of thatching-grass plots, and persons cultivating with the plough have been assessed on the area of their holdings in lieu of the old capitation tax; the only stamp revenue, however, is that obtained from the sale of postage stamps, and no income-tax is realized.

The capitation tax is now realized at the rate of Rs. 4 per family, of which Rs. 2 goes to the chief and R. 1 to the headman, and only R. 1 is taken by the Government. The Government demand, however, is fixed for a term of years and is paid by the chief irrespective of the actual collections, which vary from year to year. The total revenue in 1903-4 was Rs. 1,28,000: namely, Rs. 87,000 from forests, Rs. 22,000 from land, Rs. 9,000 from thatching-grass, Rs. 8,000 from the capitation tax, and Rs. 2,000 from stamps.

Land revenue.

Land revenue is assessed only on land cultivated with the plough. In order to encourage the people to take to this form of cultivation, all new holdings are granted free for three years; the revenue is then fixed by the Superintendent, and may not be enhanced for ten years. The average rate of assessment is Rs. 1-8 per acre. The chief receives two annas and the headman three annas of every rupee of rental realized for plough cultivation, with the object of enlisting their co-operation in encouraging it.

Police and jails.

The police force is under the direct control of the Superintendent. It consists of one inspector, 7 sub-inspectors, 17 head constables, and 113 constables, including a reserve of 3 sub-inspectors, 10 head constables, and 59 constables. There are in all 8 police stations. Prior to the annexation of the Lushai Hills, a much stronger body of police was maintained as a protection against raids; its strength in 1872 was 656. The present police are armed with Martini-Henry rifles. There is a lock-up at Rāngāmāti, in which persons sentenced to short terms of imprisonment are confined; other prisoners are sent to the jail at Chittagong town.

Education.

Male education is further advanced than might have been expected in such a remote tract, and the Census of 1901 showed that 4.5 per cent. of the population (7.9 males and 0.3 females) could read and write. The number of pupils in the schools increased from 721 in 1892-3 to 1,195 in 1900-1; and 1,574 boys and 115 girls were at school in 1903-4, being respectively 15.3 and 1.3 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 111: namely, 3 secondary, 81 primary, and 27 special schools. The expenditure on

education was Rs. 20,000, of which Rs. 16,000 came from Provincial funds and Rs. 700 from fees.

The Hill Tracts contain two small police hospitals, one at Rāngāmāti and the other at Bāndarban. Two charitable outdoor dispensaries were opened in 1902 at Mānikcherī and Mahālcharī, and a third in 1904 at Rāngāmāti. In 1903 the cases of 6,000 out-patients were treated, and 122 operations were performed; the cost of maintenance, amounting to Rs. 2,000, was met by Government. Medical.

Vaccination has been compulsory since 1893. The great distances and bad communications are obstacles to progress; but 6,700 persons, or 54 per 1,000 of the inhabitants, were successfully vaccinated in 1903-4. Vaccination.

[Capt. T. H. Lewin, *Hill Tracts of Chittagong and Dwellers thereof* (Calcutta, 1869), and *The Fly on the Wheel* (1885); Emil Riebeck, *Chittagong Hill Tracts*, translated by A. H. Keane (1885).]

Chakmā.—One of the three circles into which the Chittagong Hill Tracts, Eastern Bengal and Assam, are divided for administrative purposes. It occupies the centre and north of the District, lying between 22° 7′ and 23° 13′ N. and 91° 43′ and 92° 36′ E., with an area of 2,421 square miles. It is a land of hills and valleys, bounded on the south by the Bomong circle, on the north-west by the Mong circle, on the north and east by forest Reserves, and on the west by the District boundary. Population (1901), 48,789, having increased by 7·1 per cent. since 1891. The people mostly belong to a tribe known as Chakmās (see CHITTAGONG HILL TRACTS), and the circle is administered by the Chakmā Rājā. There are 94 villages, one of which, RĀNGĀMĀTI, is the residence of the chief and the head-quarters of the District. The present chief is Rājā Bhuban Mohan Rai.

Mong.—One of the three circles into which the Chittagong Hill Tracts, Eastern Bengal and Assam, are divided for administrative purposes. It occupies the north-west corner of the District, lying between 22° 45′ and 23° 47′ N. and 91° 41′ and 92° 7′ E., with an area of 653 square miles. The greater part of the country consists of hills and ravines covered with dense tree jungle. The population in 1901 was 31,898, compared with 22,708 in 1891. Most of the people are Tipperas (*see* HILL TIPPERA). There are 128 villages, of which MANĪKCHERI is the residence of the chief who administers the circle. The title of Mong Rājā is hereditary; the present incumbent is Rājā Nephru Sain.

Bomong.—One of the three circles into which the Chittagong Hill Tracts, Eastern Bengal and Assam, are divided for administrative purposes. It occupies the south of the District, lying between 21° 11′ and 22° 30′ N. and 92° 6′ and 92° 42′ E., with an area of 2,064 square miles. It is bounded on the north by the Chakmā circle; on the south and west by the District boundary; and on the east by forest Reserves. The country consists of a succession of hill ranges and valleys covered with forest. The population (1901) is 44,075, having increased by 12·9 per cent. since 1891. Most of the people are Maghs, or Arakanese. There are 74 villages, of which BĀNDARBAN is the residence of the Bomong, an hereditary title attaching to the chief who administers the circle. The present chief is named Cholaphru Chaudhri.

Bāndarban.—Village in the Chittagong Hill Tracts, Eastern Bengal and Assam, situated in 22° 13′ N. and 92° 14′ E., on the banks of the Sangu river. Population (1901), 2,370. It is the residence of the Bomong chief.

Barkal.—Mart in the Chittagong Hill Tracts, Eastern Bengal and Assam, situated in 22° 43′ N. and 92° 25′ E., on the right bank of the Karnaphuli river. Population (1901), 2,194. It gives its name to the hills in the vicinity. The river here forms rapids, and a tramway has been constructed by which passengers and goods are transhipped.

Mānikcherī.—Village in the Chittagong Hill Tracts Eastern Bengal and Assam, situated in 22° 51′ N. and 91° 51′ E., on a stream of the same name. Population (1901), 1,356. It is the residence of the Mong Rājā.

Rāngāmāti.—Head-quarters of the Chittagong Hill Tracts, Eastern Bengal and Assam, situated in 22° 39′ N. and 92° 12′ E., on the banks of the Karnaphuli river. Population (1901), 1,627. Rāngāmāti contains a high school and hospital. It is the residence of the Chakmā chief. The London Baptist Mission has a branch there.

SURMĀ VALLEY AND HILL DISTRICTS

Surmā Valley and Hill Districts Division.—Division in the Province of Eastern Bengal and Assam, consisting of the upper valley of the Surmā or Barāk, together with the section of the Assam Range which bounds it on the north, and the Lushai Hills, a tract of mountainous country lying south of Cāchār. It lies between 22° 19′ and 26° 48′ N. and 90° 45′ and 94° 50′ E., and covers an area of 25,481 square miles. The head-quarters of the Commissioner are at SILCHAR TOWN. The population of the Division at the last four enumerations was: (1872) 2,165,943, (1881) 2,546,241, (1891) 2,879,251, and (1901) 3,084,527. The density is only 121 persons per square mile, but the lowness of this figure is due to the inclusion of the hill tracts; and the plains alone support 357 persons per square mile. In 1901 Hindus formed 44 per cent. of the population, Muhammadans 43 per cent., and Animistic tribes 12 per cent. Other religions included Buddhists (554) and Christians (19,751), of whom 18,807 were natives. The Division contains five Districts, as shown below:—

	Area in square miles.	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Sylhet	5,388	2,241,848	10,90
Cāchār	3,769	455,593	5,14
Lushai Hills	7,227	82,434	30*
Nāgā Hills	3,070	102,402	58*
Khāsi and Jaintiā Hills	6,027	202,250	37*
Total	25,481	3,084,527	17,29

* Including house tax.

Sylhet and the Cāchār plains are a fertile and highly cultivated valley. The Hill Districts consist for the most part of sharply serrated ridges covered with forest or bamboo jungle, though in the Khāsi Hills there is a fine grassy plateau between 5,000 and 6,000 feet above the level of the sea. The Division contains eight towns, the largest being SYLHET (population, 13,893), SILCHAR (9,256), and SHILLONG (8,384). Trade in Sylhet is to a great extent carried by water; and some of the river-side

marts, such as BĀLĀGANJ, CHHĀTAK, HABIGANJ, AJMIRIGANJ, Sunāmganj, and KARĪMGANJ, are places of considerable importance. BĀNIYĀCHUNG was the most populous village in the old Province of Assam; and CHERRAPUNJI, on the southern face of the Khāsi Hills, has the reputation of possessing the heaviest recorded rainfall in the world.

Boundaries, configuration, and hill and river systems.

Sylhet District (*Srihatta*).—District on the south-west frontier of Eastern Bengal and Assam, lying between 23° 59′ and 25° 13′ N. and 90° 56′ and 92° 36′ E., with an area of 5,388 square miles. It is bounded on the north by the Khāsi and Jaintiā Hills; on the east by Cāchār; on the south by the Lushai Hills and the State of Hill Tippera; and on the west by the Eastern Bengal Districts of Tippera and Mymensingh.

Sylhet consists of the lower valley of the Barāk or Surmā river, a rich alluvial tract about 70 miles wide, bounded north and south by mountains, and opening westwards to the plain of Eastern Bengal. The greater part of the District is a uniform level, broken only by clusters of little hillocks called *tīlas*, and intersected by a network of rivers and drainage channels. During the rainy season, from June to October, the torrents that pour down from the surrounding hills convert the entire western part into a sea of water. The villages are, as a rule, built on the banks of the rivers, which, as is the case in most alluvial tracts, are raised by the annual flood deposits to a higher level than that of the surrounding country, and stand out above the waste of waters like islands in a lake. The central and eastern portion consists of a broad plain, covered with rice-fields, and dotted over with hamlets embowered in groves of fruit trees and bamboos. On the north the Khāsi Hills rise abruptly like a wall from the level of the plain. On the south the Tippera Hills throw out eight spurs into the valley, the highest of which is about 1,000 feet above sea-level. In their natural state these hills are overgrown with grass and low scrub jungle, but many have been cleared for the cultivation of tea.

The river system of Sylhet is constituted by the Barāk or SURMĀ, with its many tributaries and offshoots. This river enters the District from Cāchār, and forthwith bifurcates into two branches. One, under the name of the Surmā, flows beneath the hills bordering the north of the District; the other, called the Kusiyārā, runs in a south-westerly direction, and the two unite again near the south-western boundary to fall into the estuary of the Meghnā. The principal tributaries on the north bank are the Lubha, the BOGĀPĀNI, and the JĀDUKĀTA, while from the Lushai and Tippera Hills come the SINGLĀ, the

LANGAI, the MANU, and the KHOWAI. There are no lakes in the ordinary meaning of the term, but the low-lying *haors*, or swamps, are a peculiar feature of the District. During the rains they become filled with water; but in the cold season this dries up, except in the very centre of the basin, and the land affords excellent pasturage or can be sown with mustard or early rice. The submerged area is being steadily reduced by the deposit of silt, and in course of time these basins will no doubt be raised above flood-level.

The plain presents the usual characteristics of an alluvial tract, but the process of deltaic formation has proceeded slowly, and the town of Sylhet is only 48 feet above sea-level. The low ranges of hills are, for the most part, composed of sandstone of Upper Tertiary origin, and the *tīlas* are formed of layers of sand, clay, and gravel, highly indurated by a ferruginous cement. Geology.

The vegetation of the plains of Sylhet does not differ materially from that of Eastern Bengal. The marshes are covered with grasses and reeds, and during the rainy season with floating islands of aquatic plants and sedges. The low hills are clothed with scrub, and towards the south with forest. Botany.

Wild animals are not common, except at the foot of the hills, where elephants, tigers, leopards, wild hog, and deer are found. Teal and wild duck abound in the low-lying marshy country to the west, and in the Jaintiā plains to the east; and wild geese, jungle-fowl, and pheasants are common. The rivers swarm with fish, and the drying of fish forms an important industry. Excellent mahseer fishing is to be had in the streams issuing from the northern hills. Fauna.

The climate is characterized by extreme humidity. The winter is milder than that of the Assam Valley, but there is no hot season, and the heavy precipitation during the rains keeps the air unusually cool. The country is fairly healthy, except at the foot of the hills in the north and south, where malaria is not uncommon. Climate.

The monsoon clouds sweeping up the valley are stopped by the precipitous face of the Khāsi and Jaintiā Hills, and descend in torrents of rain. In the north of the District the annual fall averages between 200 and 250 inches; but towards the south the effect of the monsoon is less pronounced, and the normal rainfall is only 100 inches. The whole of the western portion of the District is under water during the rains; but these floods are looked upon as a matter of course, and the water, when it subsides, leaves behind a layer of fertilizing silt. Rainfall.

Severe shocks of earthquake were felt in Sylhet in January,

Earthquakes. 1869, and October, 1882, but the damage done was inconsiderable in comparison with the havoc wrought by the earthquake of June 12, 1897. Nearly all the masonry buildings in the north of the District were wrecked, the banks of the rivers caved in, the earth was furrowed by cracks and fissures, and bridges and embanked roads were destroyed. The total number of deaths reported was 545; but, had the catastrophe occurred at night, this number would have been very largely increased. The majority of these casualties were due to drowning, but cases are said to have occurred in which people were actually swallowed up by the earth.

History. The District was at one time divided into at least three petty kingdoms: Gor, or Sylhet proper, LAUR, and JAINTIĀ; and the country south of the Kusiyārā seems to have been under the control of the Rājā of Hill Tippera. Gor was conquered by the Muhammadans in A.D. 1384, the last Hindu king, Gaur Gobind, being overcome more by the magic of the *fakīr*, Shāh Jalāl, than by the prowess of the officer in command of the expedition, Sikandar Ghāzī. After the death of Shāh Jalāl, Gor was included in the kingdom of Bengal and placed in charge of a governor. In the reign of Akbar it passed with the rest of Bengal into the hands of the Mughals; and in the time of this emperor Laur was also conquered, though its rulers were for some time entrusted with the charge of the frontier, and were exempt from the payment of land revenue. Gor and Laur were included in Bengal when the British obtained the Dīwāni of that Province in 1765. Jaintiā was never conquered by the Muhammadans, and retained its independence till 1835, when it was annexed by the British Government, as no satisfaction could be obtained for the murder of three British subjects, who had been kidnapped and sacrificed to the goddess Kālī.

During the early days of British rule, Sylhet, lying on the outskirts of the Company's territories, was much neglected. The population was turbulent, means of communication were difficult, and the arts of civilization were in a backward condition. The savage tribes living to the north and south of the valley disturbed the peace of the plains, and there were continual disputes as to the boundary between British territory and the Native State of Hill Tippera. On the south the offending tribes were the Kūkis and Lushais. In 1844 the Kūkis raided and secured 20 heads, and three years later killed 150 persons; but the scene of the massacre was, after careful inquiry, found to be beyond the frontier of the District. Another raid was committed in 1849, and an expedition was sent into the hills in the next

year, which kept the country quiet for a time. The Lushais, however, broke out again in 1862, 1868, and 1871. The expedition sent into the hills in 1871 had a most salutary effect; and though further expenditure of life and money was required before the tribe was finally subdued, no raids have been committed on the plains of Sylhet since that date. At the beginning of the nineteenth century robbery and murder were also common on the northern frontier, but the Khāsis were soon pacified after the annexation of the Assam Valley, and the last outbreak took place in 1831. In 1857 a party of sepoy mutineers from Chittagong entered the District from Hill Tippera, but were defeated at Lātu and driven into Cāchār. The District originally formed part of the Dacca Division of Bengal, but in 1874 it was placed under the charge of the newly appointed Chief Commissioner of Assam.

Sylhet contains few archaeological remains of interest. The mosque of Shāh Jalāl in Sylhet town is, however, deeply venerated; and at Phāljor in *pargana* Bāurbhāg there is a piece of stone which is said to be Satī's left leg, which fell there when she was hewn in pieces by Vishnu, while her neck is said to have fallen near Sylhet town.

The people.

The District, which is by far the most populous in Assam, contains 5 towns and 8,330 villages. The population at each of the four last enumerations was: (1872) 1,719,539, (1881) 1,969,009, (1891) 2,154,593, and (1901) 2,241,848. The comparatively small increase during the last intercensal period is due to the unhealthiness of the North and South Sylhet subdivisions, where the population outside tea gardens decreased by about 4 per cent. The District includes five subdivisions: NORTH SYLHET, with head-quarters at Sylhet town; SOUTH SYLHET, with head-quarters at Maulavi Bāzār; and SUNĀMGANJ, HABIGANJ, and KARĪMGANJ, with head-quarters at places of the same name.

The table on the next page gives particulars of area, towns and villages, and population according to the Census of 1901.

Nearly 53 per cent. of the population in 1901 returned themselves as Muhammadans, and nearly 47 per cent. as Hindus.

Bengali is the common speech of the people, and was returned by 92 per cent. of the population, though the local dialect known as Sylhetī differs materially from the language spoken in Bengal proper. Five per cent. speak Hindī and one per cent. Manipurī. In spite of the importance of the tea industry, the proportion of foreigners is much lower than in most of

the plains Districts of Assam; in 1901 they formed only 7 per cent. of the whole.

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
North Sylhet	1,055	1	1,956	463,477	439	− 3·9	23,590
Sunāmganj .	1,493	1	2,493	433,752	291	+ 4·9	13,961
Habiganj .	952	1	1,935	555,001	583	+ 9·9	27,194
South Sylhet	840	1	1,022	379,158	451	+ 2·5	14,504
Karīmganj .	1,c48	1	924	410,460	392	+ 6·7	18,270
District total	5,388	5	8,330	2,241,848	416	+ 4·0	97,519

Castes and occupations.

The respectable Hindu castes are much more strongly represented in Sylhet than in other Districts of Assam. In 1901 Brāhmans numbered 40,000 and Kāyasths 64,000, but many of these have probably a somewhat doubtful title to the names. The Navasākha or functional castes, traditionally nine in number, from whose hands water can be taken by Brāhmans, are found here as in Bengal. Those most strongly represented are the Baruis or betel-leaf growers (16,000), the Goālās or cowherds (14,000), the Nāpits or barbers (21,000), and the Telis or oil-pressers (30,000). The chief cultivating caste of Sylhet is the Dās (164,000), but the Jugis or weavers (79,000) have almost entirely forsaken the loom for the plough. The Shāhās (34,000) are by tradition liquor-sellers, but have now taken largely to general trade. The fishing and boating castes are represented by the Dom-Patnis (73,000), the Kaibarttas (44,000), and the Namasūdras or Chandāls (132,000). The tribes most largely represented are the Manipuris, the Tipperas, and the Haijongs. The last-named people are found in any numbers only in the Gāro Hills and in the adjacent Sunāmganj subdivision. Their language is akin to Bengali and they profess to be Hindus, but there is probably a considerable admixture of hill blood in their veins. Members of European and allied races in the District numbered 317 in 1901. Nearly 82 per cent. of the population in that year were supported by agriculture, a proportion which, for Assam, is comparatively low, and is accounted for by the presence of the fishing and functional castes in considerable numbers. The proportion of priests is also large.

Christian missions.

Members of the Welsh Presbyterian Mission are stationed at Maulavi Bāzār, Sylhet, and Karīmganj, and there is a Roman

Catholic priest at Badarpur; but the total number of native Christians in the District in 1901 was only 394.

General agricultural conditions.

The soil consists, for the most part, of a blue clay, which becomes black on the borders of the swamps, or *haors*; but the character of the crop depends more upon the level of the land, the liability to flood, and the rainfall than upon the constituents of the soil in which it is grown. Rice, which is the staple crop, falls into two classes, early and late. Early rice includes *aus* and *sailbura*, or *boro*, a variety which is sown on low land when the water subsides in November and is reaped in the spring. Late rice consists of *sail*, which is sown about May, transplanted two months afterwards, and reaped in December; and *āman*, a long-stemmed variety, which is sown in April or May, and ripens towards the end of the year.

Chief agricultural statistics and principal crops.

The following table shows the area of settled and cultivated land, in square miles:—

Subdivision.	Area shown in the revenue accounts.			Forests.
	Settled.	Unsettled.	Cultivated.	
North Sylhet	929	126	3,770	...
Sunāmganj	1,345	148		...
Habiganj	929	23		...
South Sylhet	670	170		...
Karīmganj	774	274		103
Total	4,647	741	3,770	103

The estimated area (in square miles) under the principal crops in 1903–4 was rice 3,220, linseed 108, mustard 58, and sugar-cane 23. The cultivation of jute is believed to be extending, and it is thought that there are about 9,200 acres under that fibre; but, in the absence of definite measurements, all these figures have to be received with caution. Cotton is grown by the hill tribes; and minor crops include *til*, linseed, tobacco, China millet, and different kinds of pulse.

Improvements in agricultural practice.

The greater portion of the District is permanently settled, and there are no means of ascertaining the extent to which cultivation is increasing. Little has been done to improve the quality of the staple crops or to introduce new varieties, and the system of making loans to agriculturists is still in its infancy. In recent years the District has, however, witnessed a great development of the tea industry. The tea plant was first discovered growing wild in 1856, and gardens were opened out in the following year; but some time elapsed before capital

was attracted to Sylhet to any considerable extent. In 1875 the out-turn of manufactured tea was only 470,000 lb. By 1882 it had risen to 4,660,000 lb., but this was barely a third of the yield in Cāchār or Sibsāgar. Since then the industry has grown rapidly in importance. In 1904 there were 124 gardens with 72,497 acres planted out, which yielded 39,000,000 lb. of manufactured tea, and gave employment to 194 Europeans and 79,397 natives, nearly all of whom had been brought from other parts of India. The majority of the gardens are situated in the south of the District, on the low hills projecting into the plain from Tippera and in the intervening valleys. As in Cāchār, the yield of leaf is large, but the flavour is not as good as that of Assam tea. The largest companies are the Consolidated Tea and Lands Company, with head-quarters in the Bālisirā valley; the Chargolā Tea Association, in the Singlā valley; and the Langlā Tea Company, in the South Sylhet subdivision.

Cattle. No attention is paid to stock-breeding, and the cattle are poor, undersized animals. During the dry season they are herded in the *haors* or turned loose to graze on the rice stubble; but in the rains, when the country is under water, they are fed on cut grass or straw. Buffaloes are, as a rule, imported from Bengal. Goats are usually kept for food or sacrificial purposes.

Irrigation. Artificial irrigation is used only for the *boro* crop, which is sown in the cold season. The water lying in the centre of a basin is retained by an embankment, and then distributed through small channels over the neighbouring fields.

Forests. The plains portion of the District has been almost denuded of timber; but the low hills are still to some extent covered with forest, the greater part of which is, however, included within the limits of the permanently settled estates. There are two Reserves, situated in the south-east corner of the Karīmganj subdivision, which cover an area of 103 square miles; and the total area of Government waste or 'unclassed' state forest amounts to 177 square miles. There is a considerable demand for timber in both Sylhet and the neighbouring Districts of Eastern Bengal, but the bulk of the supply is obtained from Cāchār, Hill Tippera, or private land. The most valuable timber trees are *jarul* or *ajhar* (*Lagerstroemia Flos Reginae*) and *nahor* (*Mesua ferrea*).

Minerals. No minerals are worked within the District, though the excellent limestone extracted from the hills immediately beyond the northern border is generally burnt on the banks of the

Surmā and other rivers, and is known to the trade by the name of 'Sylhet lime.'

Apart from tea, the industries of Sylhet are in a somewhat languishing condition. The Manipuri women settled in the District weave cotton cloth, handkerchiefs, and mosquito curtains; but weaving is not practised, as in the Assam Valley, as a home industry, and even the professional weaving castes have largely abandoned that occupation for agriculture. At the village of Laskarpur there was formerly a colony of Muhammadans who inlaid iron weapons with silver and brass scroll-work, or lac with feathers and talc; but these industries have almost died out. The famous *sītalpāti* mats are still made; and there is a trade in bangles cut from shells, basket-work furniture, leaf umbrellas, and other things of that nature. Boat-building has always been important in Sylhet. Mr. Lindsay, the Collector in 1778, built one ship of 400 tons burden and a fleet of twenty craft which carried rice to Madras; and large numbers of boats are still made every year. Blacksmiths forge hoes, billhooks, and axes; and rough pottery is made, but not in sufficient quantities to satisfy the local demand. In *pargana* Pāthāria there is a manufacture of *agar attar*, a perfume distilled from the resinous sap of the *agar* tree (*Aquilaria Agallocha*), which is much esteemed by Oriental nations, and is exported via Calcutta to Turkey and Arabia. The only factory, besides those in which tea is manufactured, is a saw-mill at Bhāngā Bāzār, which in 1903 gave employment to one European and 50 natives.

Arts and manufactures.

The trade of the District is very considerable. The principal imports are cotton piece-goods, gram and pulse, metals, kerosene and other oils, salt, sugar, spices, and unmanufactured tobacco. The chief exports are rice, hides, oilseeds, lime and limestone, and tea. The bulk of the trade is with the neighbouring Province of Bengal, and is carried by country boats, which travel along the numerous waterways into almost every corner of the District. Steamers, however, have a large share, and the amount carried by the Assam-Bengal Railway is steadily increasing. The largest mart is at BĀLĀGANJ on the Kusiyārā. Other important places are CHHĀTAK, where there is a big business in lime, oranges, and other products of the Khāsi Hills; HABIGANJ, Sunāmganj, AJMIRIGANJ, and KARĪMGANJ, which is conveniently situated on both the river and the railway. SYLHET TOWN is still the largest place; but it is steadily declining in importance, as the bed of the river has silted up and steamers are no longer able to come so far in the dry

Commerce.

season, while it is far removed both from the principal centres of the tea industry and from the railway. In addition to these established marts, there are a large number of bi-weekly markets at which the villagers dispose of a great deal of their produce. Some of the wealthiest traders are Mārwāris, but they do not here enjoy the pre-eminence to which they have attained in the Assam Valley. Many of the natives of Sylhet, more especially the Shāhās, are keen and enterprising men of business, and there are a large number of traders from the neighbouring Districts of Bengal. Rice is exported in considerable quantities to the tea gardens of Cāchār; and the trade with Hill Tippera, which lies to the south, is valued at about 6 lakhs a year. The chief imports from this State are timber, bamboos, and raw cotton; the most important exports are fish, gram and pulse, salt, tobacco, and kerosene and other oils.

Means of communication.

The Assam-Bengal Railway runs for 120 miles through the south of the District between Chāndurā and Badarpur, connecting it with the port of Chittagong, and, by means of the steamer service between Chāndpur and Goalundo, with Calcutta. A light railway has also been sanctioned from Dwārā Bāzār on the Surmā river to the Maolong coal-field in the Khāsi Hills. The India General Steam Navigation Company and the Rivers Steam Navigation Company run a daily service of steamers during the rainy season from Calcutta up the Kusiyārā into Cāchār. Small steamers also run from Karīmganj by the Langai to Langai *ghāt*, up the Manu to Chatlapur, along the Doloi to Kurmā, and from Markhali near the western border of the District past Sunāmganj and Chhātak to Sylhet town. During the cold season the large steamers proceed to Chhātak; beyond that point there is not enough water in the Surmā for steamer traffic in the dry season. Through traffic continues to go from Markhali to Silchar, but small feeder-steamers have to be employed, as the river contains very little water. The total length of unmetalled cart-roads maintained in 1903–4 was 1,559 miles, of metalled roads 7 miles, and of bridle-paths 118 miles. With the exception of 22 miles of roads and 118 miles of bridle-paths, which were under the charge of the Public Works department, and the roads within municipal limits, all are maintained from Local funds. Water is, however, the recognized means of transport and locomotion, and in many parts of the District roads would be liable to obstruct the drainage and would thus have a prejudicial effect upon cultivation. During the dry months a large number of cold-season tracks are made over the fields.

The most important lines of communication are those from Sylhet to Silchar via Karīmganj and Badarpur, and to the Kulaurā railway station via Fenchuganj; and the roads that connect Maulavi Bāzār and Habiganj with the railway. Large sums of money have also been spent on the construction of the Sunāmganj-Paglā road, and the road from Salutikar to Companyganj, which is a section of the route from Sylhet to Shillong. Both of these roads have been made across the line of drainage, and are exposed to enormous pressure from the floods that pour down from the hills. Except in the immediate vicinity of tea gardens, there is hardly any cart traffic, and goods taken by land are, as a rule, carried by coolies.

Famine.

Like the rest of Assam, Sylhet has been free from scarcity during the past century; but it is said that nearly one-third of the population died in 1781 from the effects of a famine, caused by a flood which swept away the produce of an unusually bountiful harvest. In 1901 some distress was caused in the western part of the District by the failure of the harvest of the previous year, and a few thousand rupees were distributed in relief by the local authorities.

District subdivisions and staff.

For general administrative purposes, the District is divided into five subdivisions: NORTH SYLHET, which is in the immediate charge of the Deputy-Commissioner; SOUTH SYLHET and KARĪMGANJ, which contain a considerable European population and are in charge of members of the Indian Civil Service; and HABIGANJ and SUNĀMGANJ, which are usually entrusted to native magistrates. The superior staff includes the usual officers, but the number of subordinate magistrates is larger than generally in Assam. This is rendered necessary by the density of the population and the complexity of the land revenue settlement.

Civil and criminal justice.

Sylhet differs from the rest of Assam and resembles Bengal in its arrangements for the administration of civil justice. The District Magistrate and his Assistants do not, as elsewhere, exercise civil jurisdiction, this branch of the work being entrusted to the District Judge assisted by two Sub-Judges and ten Munsifs. The peculiar features of the revenue settlement give rise to a large number of rent and title suits, and unfortunately the parties concerned not unfrequently take the law into their own hands. In 1903 there were no less than 402 cases of rioting, some of which were attended with loss of life. A special feature of the District is the river dacoities committed by bands of armed men, who attack boats laden with merchandise. Detection is extremely difficult, as the

robbers leave no tracks, and can quickly cross the frontier of the Province. Burglaries and thefts are not uncommon. The Sessions Judge of Sylhet exercises the same functions in Cāchār, and the High Court at Calcutta is the chief appellate authority for both civil and criminal cases.

Land revenue. In 1582 the land revenue of Sylhet is said to have been assessed by the Mughals at Rs. 1,67,000; but the greater part of this seems to have been absorbed in the defence of the frontier, and the District apparently yielded little revenue beyond a few elephants, spices, and wood. When it passed into the hands of the East India Company, the revenue demand was fixed by Mr. Holland in 1776 at 2½ lakhs; but considerable difficulty was experienced in collecting this amount, though it was declared to be by no means an oppressive assessment. Payment was made in cowries, more than 5,000 of which went to one rupee, and the management of this unwieldy medium of circulation occasioned much loss and trouble. In 1789 Sylhet was measured up in a very perfunctory manner by the Collector, Mr. Willes, and an assessment imposed of nearly 3¼ lakhs. This assessment was subsequently made permanent, but it only applied to 2,100 square miles, large areas of waste being altogether omitted. Two features distinguish the Permanent Settlement as here effected from that carried out in most of the Districts of Bengal. The leases were issued after the land had been, in theory at any rate, surveyed and demarcated, and were given, not to large *zamīndārs*, but to the actual tillers of the soil. The result is that all land not included in the Permanent Settlement or subsequently alienated is claimed as the property of Government, and the number of estates and proprietors is extraordinarily large. Altogether there are nearly 50,000 permanently settled estates, more than 21,000 of which pay a revenue of less than one rupee, while less than 500 pay one hundred rupees or over. Considerable uncertainty has always existed as to the exact boundaries of the areas included within the Permanent Settlement, and it is quite certain that its provisions have, from time to time, been extended to land to which it did not originally apply. Of the various kinds of temporarily settled estates, the largest class is that known as *ilām*, or land not included in the Permanent Settlement, for which notices or *ilāms* calling for claimants or objectors were issued in 1802. These estates, which are scattered all over the District, covering an area of 108,000 acres, have been settled from time to time, the last settlement having been concluded in 1902. The rates assessed

varied from $1\frac{1}{2}$ annas per acre for waste to Rs. 2–10 for the best class of homestead, and produced an enhancement of 36 per cent., chiefly owing to large extensions of cultivation. Land has also been taken up for tea in Sylhet under the different rules prescribed from time to time. A full account of the various tenures in force in the District will be found in the Introduction to the Assam *Land Revenue Manual*. The JAINTIĀ PARGANAS, which lie between the Jaintiā Hills and the Surmā river, were, however, never included in the Permanent Settlement. They cover an area of about 484 square miles, and formed part of the territory of the Jaintiā Rājā till 1835, when he was deprived of them as a punishment for atrocities committed by him on British subjects. They were last resettled in 1898, the rates imposed varying from Rs. 2–10 per acre of first-class homestead to 3 annas per acre for waste.

The land revenue and total revenue of the District are shown in the table below, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	4,89	6,34	7,77	8,42
Total revenue . .	11,93*	18,75	21,77	22,88

* Exclusive of forest revenue.

Local and municipal government.

Outside the towns of SYLHET and HABIGANJ, which are under municipal law, the local affairs of the subdivisions are managed by boards, presided over by the Deputy-Commissioner or the subdivisional officers, and composed of Europeans elected by the managers of tea gardens, and natives, most of whom are elected by the members of the *chaukīdāri panchāyats*. The expenditure of these five boards in 1903–4 exceeded $3\frac{3}{4}$ lakhs, nearly one-half of which was laid out on public works and one-third on education. The chief source of income was, as usual, local rates.

Police and jails.

For the purposes of the prevention and detection of crime, the District is divided into 31 investigating centres. The police force in 1904 consisted of 84 officers and 533 constables, with 5,158 *chaukīdārs* or village watchmen. In addition to the Sylhet District jail, there are jails at each of the subdivisional head-quarters, which can collectively accommodate 162 male and 12 female prisoners.

Education.

Education has made more progress in Sylhet than in most of the Districts of the Province. The number of pupils under instruction in 1880–1, 1890–1, 1900–1, and 1903–4 was 11,508, 26,913, 40,269, and 35,144 respectively. During the past

thirty years there has been a great development of education, and the number of scholars in 1903–4 was more than five times the number in 1874–5. At the Census of 1901, 4·3 per cent. of the population (8·1 males and 0·4 females) were returned as literate. This proportion was exceeded only by the neighbouring Districts of Cāchār and the Khāsi and Jaintiā Hills. There were 872 primary and 64 secondary schools, and one special school, in the District in 1903–4. The number of female scholars was 1,664. The great majority of the pupils under instruction were only in primary classes, and no girl had advanced beyond that stage. Of the male population of school-going age, 16 per cent. were in the primary stage of instruction, and of the female population of the same age one per cent. The proportion of Muhammadans under instruction to those of school-going age for boys was 12 and for girls less than one per cent. There is an aided second-grade Arts college in the town of Sylhet. The total expenditure on education in 1903–4 was Rs. 2,52,000, of which Rs. 60,000 was derived from fees. Of the direct expenditure, 36 per cent. was devoted to primary schools.

Medical. The District possesses 5 hospitals and 41 dispensaries[1], which contain accommodation for 56 in-patients. In 1904 the number of cases treated was 302,000, of whom 800 were in-patients, and 10,300 operations were performed. The expenditure was Rs. 55,000, the greater part of which was met from Local and municipal funds.

Vaccination. The proportion of persons successfully vaccinated in 1903–4 was 40 per 1,000, or about 4 per 1,000 less than the average for the whole Province. Vaccination is compulsory only in the town of Sylhet.

[Sir W. W. Hunter, *A Statistical Account of Assam*, vol. ii (1879); B. C. Allen, *District Gazetteer of Sylhet* (1906).]

Sylhet, North.—Head-quarters subdivision of Sylhet District, Eastern Bengal and Assam, lying between 24° 36′ and 25° 11′ N. and 91° 38′ and 92° 26′ E., with an area of 1,055 square miles. On the north it is bounded by the Khāsi and Jaintiā Hills. The north-east corner of the subdivision, which is known as the JAINTIĀ PARGANAS, originally formed part of the territories of the Jaintiā Rājā. The greater part of North Sylhet consists of a flat plain, but a little to the east of Sylhet town low hills crop up above the alluvium. The general level of the country is higher than in the west of the District, but the enormous rainfall precipitated on the

[1] Including one dispensary, details of which are not available.

face of the hills renders the low land at their foot quite unfit for anything but cold-season cultivation. The average fall at Sylhet town is 157 inches, while at Lālākhāl, which is nearer the hills, it is over 100 inches more. The population in 1891 was 482,341, which by 1901 had fallen to 463,477, a decrease of nearly 4 per cent., as compared with an increase of 4 per cent. in the District as a whole. The cause of the decrease appears to have been a severe epidemic of malarial fever in 1897 and 1898; but the population is still dense, there being 439 persons per square mile, as compared with 416 for the District as a whole. The subdivision contains one town, SYLHET (population, 13,893), the District head-quarters; and 1,956 villages. The staple food-crop is transplanted rice. There are 22 tea gardens, which in 1904 had 7,684 acres under plant and gave employment to 15 Europeans and 7,211 natives. For administrative purposes the subdivision comprises the three *thānas* of Sylhet, Kānairghāt, and Bālāganj, and is under the immediate charge of the Deputy-Commissioner of the District. The demand on account of land revenue and cesses in 1903-4 was Rs. 3,47,000.

Sunāmganj.—Subdivision in the north-western corner of Sylhet District, Eastern Bengal and Assam, lying between 24° 33′ and 25° 13′ N. and 90° 56′ and 91° 49′ E., with an area of 1,493 square miles. The population in 1901 was 433,752, compared with 413,381 in 1891, an increase of nearly 5 per cent., which was a little higher than the rate for the whole District. The south-west monsoon sweeping up the Surmā Valley is checked by the precipitous wall of the Khāsi Hills and pours down in torrents of rain on the plain beneath. The greater portion of the subdivision is thus completely submerged in the rains, and is able to support only a comparatively sparse population, 291 persons per square mile, compared with 416 for the whole District. Sunāmganj consists of a level plain, much of which lies too low for cultivation, being covered with a dense jungle of reeds and grasses. Excellent fodder is obtained in the swamps in the cold season, and they are resorted to by cattle graziers in considerable numbers. The drying of fish is also an industry of some importance, and large quantities of this malodorous product are exported to the Khāsi Hills. The staple food-crops are *āman*, a long-stemmed variety of rice grown in marshy ground, and *boro* rice, which is reaped before the floods rise. The principal centres of trade are Sunāmganj (population, 3,530), the head-quarters, and CHHĀTAK, where there is a large traffic in lime,

which is quarried in the Khāsi Hills and burnt on the banks of the Surmā river. Sunamgānj, situated on the left bank of the Surmā river, is a place of call for steamers. The subdivision is usually in charge of a native magistrate, and for administrative purposes is divided into the four *thānas* of Sunāmganj, Chhātak, Dirai, and Dharmapāshā. It contains one town, Sunāmganj; and 2,493 villages. The demand on account of land revenue and cesses in 1903–4 was Rs. 80,000.

Habiganj Subdivision.—Subdivision in the south-west corner of Sylhet District, Eastern Bengal and Assam, lying between 23° 59′ and 24° 41′ N. and 91° 10′ and 91° 43′ E., with an area of 952 square miles. The subdivision forms a level plain intersected with numerous rivers and watercourses, into the southern portion of which low hills project from the Tippera system. The annual rainfall at Habiganj town averages only 95 inches, which is considerably less than that recorded in most other places in the District. The population, which in 1891 was 504,592, had risen by 1901 to 555,001, an increase of 10 per cent.; and the density is now 583 persons per square mile, as compared with 416 for the District as a whole. The staple food-crop is *sail*, or transplanted winter rice, and the tea industry has only recently become of importance. In 1904 there were 12 gardens with 9,990 acres under plant, which gave employment to 26 Europeans and 9,505 natives. The Assam-Bengal Railway runs through the south of the subdivision; but the rivers, of which the most important are the Barāk, Khowai, and Kālni, are largely used as trade routes. The subdivision is divided into the four *thānas* of Habiganj, Bāniyāchung, Mādhabpur, and Nabiganj. It contains one town, HABIGANJ (population, 5,236), the head-quarters; and 1,935 villages. The subdivisional staff is unusually strong, as the amount of business to be disposed of is large, and four Munsifs are employed on civil work. The subdivisional magistrate is generally a native of India. The demand on account of land revenue and cesses in 1903–4 was Rs. 2,11,000.

Sylhet, South.—Subdivision in the south of Sylhet District, Eastern Bengal and Assam, lying between 24° 7′ and 24° 40′ N. and 91° 37′ and 92° 15′ E., with an area of 840 square miles. The general appearance of the subdivision is that of a level plain, into which three spurs project from the Tippera hills. As in the east of Sylhet, the rainfall is very heavy, but the average at Maulavi Bāzār (104 inches) is considerably less than in the north of the District. The population rose from 369,641 in 1891 to 379,158 in 1901; but the whole

of this increase was due to the tea-garden population, which numbered about 70,000, and the village population decreased by nearly 4 per cent. The density is 451 persons per square mile, which is considerably above the average for the District as a whole. The head-quarters are at Maulavi Bāzār (population, 2,481), situated on the Manu river at the northern extremity of a range of low hills. It contains a small jail and the courts, but is otherwise of little importance. The staple food-crop is *sail*, or transplanted winter rice. The cultivation of tea is an important industry; in 1904 there were 55 gardens with 33,410 acres under plant, which gave employment to 102 Europeans and 38,555 natives. The Assam-Bengal Railway runs through the south of the subdivision, but the principal rivers, such as the Kusiyārā and Manu, are also largely used as trade routes. For administrative purposes South Sylhet is divided into the three *thānas* of Maulavi Bāzār, Kamalganj, and Hingājiya. It contains 1,022 villages. The subdivisional magistrate is almost invariably a European. The demand on account of land revenue and cesses in 1903-4 was Rs. 2,27,000.

Karīmganj Subdivision.—Subdivision in the south-east of Sylhet District, Eastern Bengal and Assam, lying between 24° 15′ and 25° N. and 92° 2′ and 92° 36′ E., with an area of 1,048 square miles. It contains one town, KARĪMGANJ (population, 5,692), the head-quarters; and 924 villages. The northern portion of the subdivision is a level plain, but to the south it is much broken by hills. The Saraspur and Pātharkāndi ranges project into the valley from the Lushai-Tippera system; and a third range of low hills, which intervenes between them, separates the valleys of the Langai and Singlā rivers. The lower hills have been largely taken up for tea, but the upper valleys of these two rivers are still, to a great extent, covered with jungle. Attempts have been made to colonize this tract; but they have met with only a qualified measure of success, as it is very inaccessible, and much of the land is not well adapted for cultivation. At the extreme end of this valley are located the only forest Reserves in the District, which cover an area of 103 square miles. The population of Karīmganj in 1891 was 384,638, and by 1901 had risen to 410,460, an increase of nearly 7 per cent. Like the rest of Sylhet, the subdivision is densely peopled; and, in spite of the large tracts of waste land in the south, the density in 1901 was 392 persons per square mile, which is but little below the figure for the District as a whole. The rainfall at Karīmganj town is as much as 160 inches in the year, but in the Langai

valley it is about 50 inches less. The staple food-crop is *sail* or transplanted winter rice, and the dense groves of areca palms surrounding the villages are a special feature in the landscape. The cultivation of tea is an important industry; in 1904 there were 35 gardens with 21,413 acres under plant, which gave employment to 51 Europeans and 24,126 natives. Karīmganj is almost invariably in charge of a European magistrate, and for administrative purposes is divided into the two *thānas* of Karīmganj and Jaldhub. The demand on account of land revenue and cesses in 1903–4 was Rs. 2,24,000.

Jaintiā Parganas.—A tract of country in the north-east corner of Sylhet District, Eastern Bengal and Assam, lying between 24° 52′ and 25° 11′ N. and 91° 45′ and 92° 25′ E., and between the Jaintiā Hills and the Surmā river. Area, 484 square miles; population (1901), 121,157. The *parganas* consist of a series of low depressions or basins drained by the streams flowing into the Surmā. The banks of the rivers are the highest part of the country, and are generally lined with villages, but in the centre of the basins water often remains throughout the year. Much of the land at the foot of the hills and at the western end of the tract lies too low for cultivation and is covered with high jungle, and here and there the level of the plain is broken by low isolated hills. The *parganas* originally formed part of the territory of a native prince whose dominions extended over the Jaintiā Hills to the Kalang river in the plains of Assam. The Jaintiā Rājās were of Synteng or Khāsi origin, and, although they had long come under the influence of Hinduism, the custom of descent through the female line was still maintained. Tradition has preserved the names of twenty-two kings, and is, to some extent, confirmed by coins and native records, which refer to the conquest of the State by the Koch king Nar Nārāyan about 1565. The Jaintiā Rājā was defeated and captured by the Ahom generals at the beginning of the eighteenth century; but the hillmen declined to submit to the conqueror's yoke, and the State continued for all practical purposes to be independent. When Cāchār was invaded by the Burmans in 1824, the Jaintiā Rājā entered into an alliance with the British, but his conduct in this, as in other matters, was not entirely above suspicion. In 1832 he kidnapped four British subjects from Sylhet, and sacrificed three of them at Phāljor before the shrine of the goddess Kālī. Similar attempts had been made on three previous occasions, and the British Government demanded the surrender of the guilty parties. No satisfaction could be obtained by diplomacy; and in 1835 the Government, as a mark

of their displeasure, annexed that portion of the kingdom which lay in the Sylhet plains. The Rājā then declined to retain any portion of his diminished dominions, and the Jaintiā Hills lapsed to the British Government. After annexation the *parganas* were settled in 1836 for Rs. 36,000, and this settlement remained substantially in force for the next twenty years. In 1856 they were resettled for a further term of twenty years, the revenue demand at the commencement of the settlement being Rs. 54,000, rising to Rs. 62,000 in 1876, owing to the inclusion of land taken up during its currency. At the next settlement the revenue was raised to Rs. 1,68,000; but as it was found that the people could not bear such a sudden enhancement, the demand was reduced to Rs. 1,54,000. In 1898 the *parganas* were again resettled for a term of fifteen years, the demand being fixed at Rs. 1,87,000 on an area of 197,000 acres, of which 72,000 acres were uncultivated. The rates assessed on homestead and cultivated land vary from Rs. 2-10 to 12 annas an acre. Four-fifths of the cultivated area is under rice, most of which is of the long-stemmed variety sown in marshy tracts. In the cold season mustard and linseed are grown, chiefly on land which lies too low for rice. The rainfall is abundant, but is sometimes unfavourably distributed, and much damage is occasionally done by the floods of the hill streams. On the other hand, the soil is fertile, and the villagers can obtain a ready market for the surplus products of their rice-fields and of the excellent fruit gardens that surround their houses. The people are, however, unenterprising and backward, village industries are almost unknown, and the ryots are in consequence compelled to buy nearly everything that they require. A considerable portion of the *parganas* lies too low for cultivation and is covered with dense jungle, and the climate at the foot of the hills is malarious and unhealthy.

Ajmiriganj.—A large market in the Habiganj subdivision of Sylhet District, Assam, situated in 24° 33′ N. and 91° 15′ E., on the banks of the Surmā river. Population (1901), 583. It is an important centre of trade, the chief exports being rice, dried fish, bamboos, and mats, and the imports, grain, oil, salt, tobacco, sugar, and piece-goods. Trade is carried on largely by country boats, though the village is a place of call for river steamers.

Badarpur (*Badrpur*).—Village in the Karīmganj subdivision of Sylhet District, Eastern Bengal and Assam, situated in 24° 51′ N. and 92° 33′ E., on the south bank of the Barāk close to the boundary of Cāchār. When the Burmans invaded Cāchār

in 1824, the British troops met and defeated them near this spot. The remains of an old fort are still to be seen on a rock overhanging the river. Badarpur is now an important junction on the Assam-Bengal Railway. The main line crosses the Barāk by a fine bridge 454 yards long, which is raised sufficiently high above the river to admit of the passage of steamers at all seasons of the year. A branch line runs along the south bank of the river to Silchar. There is a temple of Siddheswar in the neighbourhood, at which a bathing fair is held every year in March.

Bālāganj.—Village in the North Sylhet subdivision of Sylhet District, Eastern Bengal and Assam, situated in 24° 39′ N. and 91° 50′ E., on the right bank of the Kusiyārā river. It is the most important centre of trade in the Surmā Valley, with a large business in rice, mustard, linseed, jute, oil, *sītalpāti* mats, and salt. The public buildings include a dispensary. Bālāganj is a place of call for river steamers, and a European firm has opened a warehouse for the sale of salt and oil.

Bāniyāchung.—Village in the Habiganj subdivision of Sylhet District, Eastern Bengal and Assam, situated in 24° 31′ N. and 91° 21′ E. It is the largest village in Assam; population (1901), 28,883. It is said to have been founded in the first half of the eighteenth century by Abid Reza, the first of the converted Hindu Rājās of Laur who submitted to pay tribute to the Mughals. The village contains a mosque of great local repute, a dispensary, a high school, two bazars, and about two hundred shops. It is surrounded by a moat, and the houses are closely packed together on islets of high land separated from one another by marshy ground and watercourses.

Chhātak.—Village in the Sunamganj subdivision of Sylhet District, Eastern Bengal and Assam, situated in 25° 2′ N. and 91° 40′ E., on the left bank of the Surmā. The river is navigable by steamers up to this point all the year round, and there is a large export trade to Bengal in lime, potatoes, and oranges. A tall masonry obelisk, erected in memory of Mr. Inglis, who founded the business in lime, stands on the summit of a low hill, from which a magnificent view is obtained over river, swamp, and forest to the blue line of the Khāsi Hills, which rise like a wall from the plain. This obelisk was cracked in three places by the earthquake of 1897, and the pieces were wrenched round in the same plane without being thrown down.

Dhākādakshin.—Village in the North Sylhet subdivision of Sylhet District, Eastern Bengal and Assam, situated in 24° 48′ N. and 92° 1′ E. The father of the Vaishnav reformer,

Chaitanya, was settled here, and in the neighbourhood a shrine to the memory of Chaitanya is visited by pilgrims from all parts of the District and even from Bengal.

Dwārā Bāzār.—Market village in the Sunāmganj subdivision of Sylhet District, Eastern Bengal and Assam, situated in 25° 3′ N. and 91° 34′ E., on the north bank of the Surmā river. It has a large export trade to Bengal in lime, bay-leaves, and oranges. Dwārā Bāzār is the river terminus of a small railway which is being constructed from this point to Ischāmati, to afford an outlet for the coal found in the Khāsi Hills.

Fenchuganj.—Village in the North Sylhet subdivision of Sylhet District, Eastern Bengal and Assam, situated in 24° 42′ N. and 91° 58′ E., on the left bank of the Kusiyārā river. Population (1901), 285. It is the head-quarters of the India General Steam Navigation Company in the Surmā Valley and an important steamer station. The public buildings include a dispensary.

Habiganj Town.—Head-quarters of the subdivision of the same name in Sylhet District, Eastern Bengal and Assam, situated in 24° 23′ N. and 91° 26′ E., at the confluence of the Khowai and Barāk rivers. The nearest railway station is at Shāistaganj, 9 miles distant. Population (1901), 5,236. Like other towns in this inundated tract, it is built on the bank of the river, which is raised a little above the level of the surrounding country. It is the head-quarters of the subdivisional magistrate and his assistants, and of the four Munsifs who dispose of the civil business of the subdivision. The public buildings include a subsidiary jail with accommodation for 54 prisoners, a dispensary with 6 beds, and a high school with an average attendance of 318 boys. The town was constituted a Union under Bengal Act V of 1876 in 1881. The receipts and expenditure in 1903-4 were about Rs. 5,000. There is a considerable trade with Bengal, most of which goes by country boat. The principal imports are grain and pulse, cotton piece-goods, kerosene and other oils, and salt; the chief exports are rice, jute, mustard, linseed, and hides. The majority of the merchants are members of the Shāhā caste.

Jaintiāpur.—Village in the North Sylhet subdivision of Sylhet District, Eastern Bengal and Assam, situated in 25° 8′ N. and 92° 8′ E. It was formerly the capital of the Jaintiā Rājā, whose territory was annexed in 1835 in consequence of his complicity in the murder of three British subjects offered up to the goddess Kālī. There were formerly some interesting remains, marking the transition from the primitive paganism of the hill tribes to

the elaborate Hinduism imported from Bengal, the former symbolized by great monoliths of unhewn stone, the latter by Hindu temples with their carvings and images. These ruins were, however, thrown down by the earthquake of 1897, and Jaintiāpur is no longer a place of much importance. A market largely attended by the hill tribes is, however, held here once a week.

Karīmganj Town.—Head-quarters of the subdivision of the same name in Sylhet District, Eastern Bengal and Assam, situated in 24° 52′ N. and 92° 22′ E., on the left bank of the Kusiyārā river. The town is favourably situated for trade, as it is a port of call for the river steamers, and has a station on the Assam-Bengal Railway. Population (1901), 5,692. The public buildings include the magistrate's and Munsif's courts, a subsidiary jail with accommodation for 35 prisoners, a hospital with 6 beds, and a high school with an average attendance of 176 boys. The subdivisional officer is almost invariably a European, and there is a branch of the Welsh Presbyterian Mission in the town. Most of the offices are located on low hills which command a fine view across the dense groves of areca-palms, with which the neighbourhood abounds, to the hills of North Cāchār. There is a considerable export trade to Bengal in unhusked rice, mustard, linseed, bamboo mats, and timber; the principal imports are cotton piece-goods, grain and pulse, kerosene and other oils, salt, sugar, and spices. The majority of the merchants are natives of the District, but there are a few Mārwāris from Rājputāna.

Sylhet Town.—Head-quarters of the District of the same name in Eastern Bengal and Assam, situated in 24° 53′ N. and 91° 52′ E., on the right bank of the Surmā river. The road from Shillong to Cāchār runs through the town; but Sylhet is somewhat inaccessible to the outside world, as during the dry season steamers cannot come up the river, and the nearest railway station is 30 miles away. This inaccessibility reacts unfavourably upon its trade. The town is steadily declining in importance, the population at the last four enumerations being: (1872) 16,846, (1881) 14,407, (1891) 14,027, and (1901) 13,893. Sylhet was the capital of a Hindu Rājā, who was conquered at the end of the fourteenth century by the Muhammadans. They were materially assisted in this enterprise by the *fakīr* Shāh Jalāl, whose mosque is situated a little to the north of the town. The place does not appear to have ever been of great importance, and is described by Mr. Lindsay, Collector in 1778, as an inconsiderable bazar, the houses of the

inhabitants being fantastically built and scattered upon the rising ground and numerous hills, so buried in groves as to be scarcely discernible. This characteristic persists to the present day, and the general appearance of the place is distinctly rural. The average rainfall is heavy (157 inches), and the climate is fairly cool and healthy even in the rains. Most of the masonry buildings were destroyed by the great earthquake of 1897, when 55 people perished in the ruins. They have since been rebuilt, and few traces of this catastrophe are now to be seen. Sylhet is the head-quarters of the ordinary District staff, and of the Sessions Judge of the Surmā Valley, and contains the largest jail in the Province, with accommodation for 658 prisoners. The convicts are employed in oil-pressing, *surkhi*-pounding, weaving, carpentry, and bamboo- and cane-work. A branch of the Welsh Presbyterian Mission has for some time been located in the town, and there is a wealthy and important Hindu *akhra* or monastery.

Sylhet was constituted a municipality under (Bengal) Act V of 1876 in 1878, and (Bengal) Act III of 1884 was subsequently introduced in 1888. The municipal receipts and expenditure during the ten years ending 1902–3 averaged Rs. 23,000. In 1903–4 the income was Rs. 33,000, including tax on houses and lands (Rs. 9,000) and tolls (Rs. 7,400); and the expenditure was Rs. 22,000, chiefly incurred on conservancy (Rs. 6,800) and public works (Rs. 3,500). The local manufactures include leaf umbrellas, shell bracelets, *sītalpāti* mats, basket-work furniture, mosquito curtains, and cotton cloth. All of these are, however, home industries, and the general trade of the place is declining. The principal educational institutions are two high schools and a second-grade college founded by Rājā Girish Chandra Roy, a *zamīndār* of the District, in 1892, which in 1903–4 had an average daily attendance of 35 students. There are four small printing presses in the town, at which two papers and two magazines are published.

Boundaries, configuration, and hill and river systems.

Cāchār (*Kāchār*) —District in Eastern Bengal and Assam, which derives its name from the Kachāri tribe, whose Rājā married a Tippera princess and received as her dowry the upper portion of the Surmā Valley. It lies between 24° 12′ and 25° 50′ N. and 92° 26′ and 93° 29′ E., and covers an area of 3,769 square miles. On the north it is bounded by the Kapili and Doiāng rivers, which separate it from Nowgong District; on the east by the Nāgā Hills and the State of Manipur; on the south by the Lushai Hills; and on the west by the District of Sylhet and the Jaintiā Hills. The District falls into two

natural divisions, the plains and the hills. The latter (area 1,706 square miles) is a section of the range which divides the Surmā Valley from that of the Brahmaputra. The former is the upper portion of the valley of the Barāk or Surmā, and consists of a level plain dotted with isolated hillocks and broken up by ranges of low hills, which project from the mountains surrounding it on three sides. The area of the plains portion is 2,063 square miles. The BARAIL range, which connects the north Manipur hills and the Khāsi range, forms a continuous wall along the north of the Barāk valley, varying from 2,500 to 6,000 feet in height. South of the Barāk the District is bounded on the east by the BHUBANS, which vary from 700 to 3,000 feet in height, and on the west by the SIDDHESWAR Hills. The plain is further broken up by two long ranges running north and south, called the Rengtipāhār and the Tilain. All of these hills are formed in ridges and peaks, with precipitous sides covered with tree forest. The general appearance of the District is extremely picturesque. On three sides it is shut in by range upon range of blue hills, whose forest-clad sides are seamed with white landslips and gleaming waterfalls. The villages are buried in groves of feathery bamboos and graceful areca-palms, and the country on every side looks fresh and green. Here and there, swamps and marshes lend variety to the scene; and the low hills with which the plain is dotted are covered, as a rule, with neat rows of tea bushes and crowned at the top with the planter's bungalow. The Barāk winds through the centre of the plain, its surface dotted with the sails of native craft, and in places hills come down almost to the water's edge.

The chief river of Cāchār is the Barāk or SURMĀ, which enters the District from Manipur at the extreme south-east corner, and, flowing north, forms the boundary between that State and British territory till it turns westward a little to the south-east of Lakhipur. Its bed is from 100 to 200 yards in width, and in places is as much as 70 feet deep. Its principal tributaries in Cāchār District from east to west are: on the south bank, the SONAI, the Ghāgrā, and the DHALESWARI, with its new channel, the Kātākhāl; on the north bank, the JIRI, which divides Cāchār from Manipur, the Chiri, the Madhurā, and the JĀTINGĀ. The Doiāng, which falls into the Kapili, a tributary of the Brahmaputra, is the largest river north of the Barail. The most important sheet of water in the District is the Chātlā *haor*, or fen, a low-lying tract between the Rengtipāhār and Tilain hill ranges, which during the greater part of

the year is drained by the Ghāgrā river. When the monsoon breaks, the rainfall on the surrounding hills, assisted by the floods of the Barāk, turns this marsh into a navigable lake 12 miles in length by 2 in breadth. The floods, however, deposit large quantities of silt, and year by year the level is being raised and the area liable to inundation diminished. Other marshes, though of less importance, are the Bakri, the Bowalia, the Kholang, the Thapani, and the Pumā.

Geology. The Cāchār plains form an alluvial tract which is gradually being raised by the action of the rivers, which overflow their banks and deposit a layer of silt. The constituents of the soil are clay, sand, and vegetable matter. The hills surrounding the valley are for the most part composed of Upper Tertiary sandstones.

Botany. The vegetation of the District presents the usual characteristics of a sub-tropical region. The hills are covered with dense evergreen forest and bamboo jungle, and in the plains there are the remains of a savannah forest, of which the principal constituents are *simul* (*Bombax malabaricum*) and *jarul* (*Lagerstroemia Flos Reginae*). High grass grows on the lower land and floating weeds cover the numerous swamps.

Fauna. Wild animals are no longer common in the valley; but elephants, bison, buffalo, tigers, leopards, bears, and various kinds of deer are still found in the wilder parts and in the hills.

Climate and rainfall. The climate of the valley is characterized by excessive humidity, and, being shut in by ranges of hills on almost every side, at certain seasons of the year it becomes decidedly oppressive. The hottest months are June to September, with an average mean temperature of about 83 degrees; the coldest month is January, with a mean of 65 degrees. During the rainy season the air is charged with moisture, the annual rainfall in the plains ranging from 100 to 165 inches, but north of the Barail towards the Nowgong border it sinks to 55.

Earthquakes. Cāchār suffers little from either cyclones or floods. In 1869 a severe earthquake seriously damaged many buildings in Silchar, and cut up the roads and wrecked the bridges throughout the District. Another severe shock was felt in 1882. The great earthquake of 1897 did some damage to masonry buildings, but the effects of the shock were inconsiderable in comparison with the widespread havoc caused in other parts of the Province.

History. The seat of the Kachāri rulers was originally fixed in the Assam Valley, and at the beginning of the thirteenth century they occupied the western portion of Sibsāgar and a large part

of Nowgong District. Their capital was situated on the banks of the Dhansiri at DIMĀPUR; and the ruins still to be seen show that the town must once have been the seat of a king, far in advance, both in power and civilization, of the simple tribesmen of the present day. In 1536 Dimāpur was sacked by the Ahom king, its ruler Detsung killed, and the people compelled to remove their capital to Maibang in the North Cāchār hills. Even here they were not safe; and in 1706 Rudra Singh, the most powerful of the Ahom princes, dispatched an army into the hills, which sacked Maibang and compelled the Rājā to take refuge in the plains of Cāchār. He was treacherously seized by the Jaintiā king, but was rescued by the Ahoms and reinstated on the throne. From this time forward the Kachāri princes seem to have settled in the plains of Cāchār, their court being usually located at Khāspur; but the Kapili valley in Nowgong District also remained Kachāri territory till it finally passed into the possession of the British.

The first occasion on which the British entered the District was in 1762, when a Mr. Verelst marched from Chittagong to Khāspur to the assistance of the Manipur Rājā, but was prevented from going farther by the difficulties of the country. The reigning family were converted to Hinduism in 1790; and a few years later the last prince, Gobind Chand, was driven from his throne by Marjit Singh of Manipur. This man had established himself on the throne of Manipur by the aid of the Burmans, but when he endeavoured to assert his independence they drove him from the State into the Surmā Valley. The Burmans then threatened to annex Cāchār, but this the British Government, which was in possession of Sylhet, was unable to permit. They espoused the cause of the Kachāri Rājā, expelled the Burmans, and handed back the District to Gobind Chand. On his death without heirs in 1830, it lapsed to the British Government under the terms of a treaty concluded in 1826.

A large portion of the North Cāchār hills had, however, been seized seventeen years before by a man called Kacha Din, who had originally been one of the Rājā's table servants. He was enticed down into the plains and killed; but his son Tula Rām succeeded in holding his own against the various attacks made upon him, and in 1829 Gobind Chand was induced by Mr. Scott, the Agent to the Governor-General on the north-east frontier of Bengal, to recognize his independence and assign him a separate fief. This territory was subsequently resumed by the British Government in 1854, in consequence of the misconduct and incapacity of Tula Rām and his descendants.

In 1857 a party of sepoy mutineers made their way from Chittagong through Tippera and Sylhet into Cāchār. They were routed and dispersed near Lakhipur, and the fugitives who escaped into the jungle were hunted down and killed by the Kūkis. The southern frontier of the District was for long exposed to the attacks of the Lushais, who raided the valley in 1849, 1869, 1871, and 1892. In 1871 they attacked the garden of Alexandrapur, killed a planter and many of the coolies, and carried off the planter's little daughter; in 1892 they raided Barunchāra and killed forty-two coolies. Trouble was also experienced in the north, and in 1880 a raid was made by the Khonoma Nāgās on the Bālādhan garden, where the manager and some of his coolies were killed. Shortly afterwards a Kachāri fanatic, named Sambhudan, established himself at Maibang and gave out that he possessed miraculous powers, and that he had been sent to restore the Kachāri kingdom. He evaded the Deputy-Commissioner, Major Boyd, who had proceeded to arrest him, and attacked and burnt the subdivisional head-quarters at Gunjong, killing three persons. He then returned to Maibang, where his followers were dispersed by the police, but in the *mêlée* Major Boyd received a wound, which for want of proper treatment brought on mortification and eventually caused his death. Sambhudan was subsequently surrounded and shot while endeavouring to escape. In 1893 some excitement was aroused by the murder of the European manager of the Bālādhan garden, and in 1898 by the death of Mr. Wilde, an engineer engaged on the construction of the railway, who was cut down by two Pathān contractors.

The District contains no archaeological remains of any importance, but there are a few rock-carvings at Maibang.

The people.

Cāchār contains one town, SILCHAR (population, 9,256), the District head-quarters; and 1,332 villages. The population at the last four enumerations was: (1872) 235,027, (1881) 313,858, (1891) 386,483, and (1901) 455,593. The steady increase is largely due to the importation of garden coolies and to immigration from the neighbouring District of Sylhet, and in 1901 more than a quarter of the total population were natives of other Provinces. The District is divided into three subdivisions: SILCHAR and HAILĀKĀNDI, with head-quarters at the towns of those names, and NORTH CĀCHĀR, with head-quarters at Hāflang.

The table on the next page gives particulars of area, towns and villages, and population according to the Census of 1901.

The majority of the population live in the centre of the

plains and in the Hailākāndi valley. The North Cāchār hills, which are covered with forest and bamboo jungle, have an indigenous population of only twelve persons per square mile. Hindus numbered 303,000, or 66 per cent. of the population; Muhammadans, 133,000, or 29 per cent.; while most of the rest profess various forms of Animism. Rather more than half the population speak Bengali, 21 per cent. Hindī and Hindustāni, 10 per cent. Manipurī, and 4 per cent. Dimasa or hill Kachārī.

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Silchar	1,649	1	809	301,884	183	+ 12·7	15,210
Hailākāndi	414	...	269	112,897	272	+ 13·0	5,352
North Cāchār	1,706	...	254	40,812	24	+ 115·4	2,139
District total	3,769	1	1,332	455,593	121	+ 17·8	22,701

Castes and occupations.

The Hindu population is chiefly composed of low castes, who have migrated from Sylhet or have come up to work on tea gardens. Those most strongly represented are the Dom-Patnis (41,000), Namasūdras or Chandāls (13,500), Baurīs (13,500), Chamārs (11,900), and Bhuiyās (9,900). There are also 28,700 Manipuris who profess the Hindu religion. Among aboriginal tribes, the Kachāris number 12,900, the Kūkis 9,300, and the Nāgās 6,600. Only 317 members of European race were enumerated in the District in 1901. The lower castes have, as a rule, abandoned their traditional occupations and taken to agriculture, which is the means of livelihood of 85 per cent. of the people.

Christian missions.

About the middle of the last century a branch of the Welsh Presbyterian Mission was started at Silchar. Twenty years later the work was abandoned, and not resumed till 1887. In 1903 there were four members of this mission residing in the town, but the total number of native Christians in the District was only 683.

General agricultural conditions.

The soil of the plains consists of clay and sand in varying proportions; and its fertility depends upon the suitability of the mixture of these two ingredients, and, still more largely, upon the water-supply. The banks of the rivers are higher than the surrounding country, and the level gradually falls away from them and rises again as it approaches the hills.

In the centre of these shallow troughs the ground is sometimes too low for cultivation, producing nothing but reeds and grass jungle; but as the rivers, when they overflow, deposit silt, the general tendency is for the level of the District to be raised. In the North Cāchār hills migratory or *jhūm* cultivation is the rule. The jungle growing on the hill-side is cut down and burned, and the seeds of hill rice and other crops are sown among the ashes. After the second or third year the clearing is abandoned, as weeds then become troublesome, and further cropping would be liable to destroy the roots of *ikra* (*Saccharum arundinaceum*) and bamboo, on the growth of which the soil largely depends for its refertilization.

Famine is unknown.

The following table shows the distribution of the area under its principal heads in 1903-4 in that portion of the plains which has been cadastrally surveyed, in square miles:— Chief agricultural statistics and principal crops.

Subdivision.	Area shown in the revenue accounts.			Forests.
	Settled.	Unsettled.	Cultivated.	
Silchar	697	952	322	772*
Hailākāndi	259	155	126	
North Cāchār	Statistics not available.			35
Total	956	1,107	448	807

* A portion of this forest area lies within the Lushai Hills.

The staple food-crop is rice, which in 1903-4 covered 326 square miles, or 66 per cent. of the cropped area. There are two principal varieties: summer rice, or *aus*, which is sown on high land and reaped about the end of June; and winter rice, which is harvested about December. Winter rice consists, again, of the transplanted variety known as *sail*, and *āman* or long-stemmed rice sown broadcast on the lower levels. The greater part of the total rice area is under *sail*. Pulse, sugar-cane, mustard, and linseed are also grown, but in comparison with rice and tea other crops are of comparatively small importance.

Tea comes next in importance to rice as regards the area under cultivation (93 square miles), but the value of the manufactured product exceeds that of the whole of the rice crop of the District. The plant was discovered growing wild in Cāchār in 1855, and the first grant of land for a tea garden was made in the following year. Reckless speculation in the promotion of tea companies led to severe depression, which reached its crisis

about 1868, when the industry was placed upon a firmer basis. The plateaux at the foot of the Barail range were found to be well adapted for the cultivation of the plant. They rise from 20 to 200 feet above the level of the plain; and though the sides are often steep, the top is generally flat, and has a layer of excellent soil from 5 to 8 feet deep. South of the Barāk, gardens were opened out on the numerous round-topped hills known as *tīlas*; but though at first the soil was little inferior to that of the plateaux, it suffered severely from erosion during the rains. In 1875 the experiment was tried of planting bushes on well-drained marsh land, and it was found that under these conditions the plant gave a large yield, though the tea was of inferior quality. There were, in 1904, 164 tea gardens with an out-turn of over 31,000,000 lb. of manufactured tea, which gave employment to 140 Europeans and 63,500 natives, the latter of whom had been for the most part recruited from other parts of India. The principal tea companies are the Tārāpur, with its centre at Dewān, 18 miles east of Silchar; the Scottpur, with its centre at Pollarbund, 11 miles east of Silchar; and the Bengal Tea Company in Hailākāndi, with its centre at Ainākhāl.

Extension of cultivation, &c.

Since the District came under British rule, it has witnessed an enormous extension of cultivation, and the area under ordinary crops at the last settlement is believed to have been more than ten times that in 1830. Little or no attempt has, however, been made to improve the condition of agriculture or to introduce new staples. The cultivators are prosperous and contented with the existing order of things, and the heavy rainfall renders artificial irrigation unnecessary.

Cattle.

The breed of cattle is poor, and buffaloes, which are of a sturdier stock, are largely used as plough animals. Sheep are imported from other parts of India, as they do not thrive in the damp climate of Cāchār.

Forests.

The 'reserved' forests of Cāchār covered in 1903-4 an area of 807 square miles. With the exception of the Langting Mupā Reserve (area 80 square miles), they are all situated near the southern and eastern borders of the District. These forests have never been thoroughly examined; it is doubtful whether the whole of the area reserved includes valuable timber, and as the population begins to press upon the soil, it is probable that the process of disforestation, which has already been begun, will be extended. The most valuable trees are *jarul* or *ajhar* (*Lagerstroemia Flos Reginae*), *nahor* (*Mesua ferrea*), *cham* (*Artocarpus Chaplasha*), *rata* (*Dysoxylon binectari-*

ferum), *sundi*, *gomari* (*Gmelina arborea*), and *gundroi* (*Cinnamomum glanduliferum*); but the bulk of the trade is in *tula* (*Sterculia alata*) and other soft woods which are used for tea boxes. In addition to the Reserves, there is a large area in the North Cāchār hills from which timber can be removed free of charge by Government tenants for their own use, or extracted for sale on payment of royalty. The out-turn of these 'unclassed' state forests has of late exceeded that from the Reserves. Rubber is obtained from *Ficus elastica*, but in recent years only a small amount has been collected. The timber merchants are usually Muhammadans, who employ Kūkis and Nāgās to fell the trees. The logs are dragged by elephants to the Barāk or its tributaries, and pay duty at Sonai, Silchar, Siyāltek, or Mātijuri.

Minerals.

No mines or minerals of any value are known to exist in Cāchār. Discoveries of coal have frequently been reported, but on examination the deposits have invariably turned out to be anthracite or lignite, not worth working. Petroleum has also been discovered near Badarpur and Māsimpur, but not utilized. The local demand for salt was formerly met from salt-wells, but a cheaper and better supply is now obtained through Calcutta.

Arts and manufactures.

Apart from tea, there are few manufactures in Cāchār, but two saw-mills give employment to 153 hands. The Manipuris weave cotton cloths and mosquito curtains, and manufacture brass vessels. *Daos* and axes are forged by blacksmiths from Sylhet, and a certain amount of rough pottery is made, but not enough to satisfy the local demand. The women of the cultivating classes seldom weave even the cloths required for home consumption, and European piece-goods are, in consequence, in great demand.

Commerce.

Cāchār exports very little except tea, which in 1904 was valued at about 94 lakhs, and forest produce, such as timber and bamboos, for which there is a considerable demand in Sylhet. The principal articles of import are rice, which is required for the large cooly population, flour, betel-nuts, salt, sugar, *ghī*, cotton piece-goods, kerosene oil, coal, and iron and steel. In 1903–4 nearly half the trade of the District was carried by rail. The bulk of the trade is with Calcutta. Manipur exports to Cāchār timber, rubber, other forest produce, and Indian piece-goods, and till recently supplied tea-seed. It receives in return European piece-goods and cotton twist, dried fish, and betel-nuts. SILCHAR, the head-quarters of the District, is the chief business centre. Other markets of some

importance are those at Lakhipur, Sonaimukh, Siyāltek, and Barkhalā; but the numerous tea gardens tend to increase trade centres, as on each large estate there is a local market, to which the villagers from the neighbourhood bring their surplus products. The natives of Cāchār have little aptitude for commerce, and the principal merchants and shopkeepers are natives of Rājputāna, Sylhet, and Bengal.

Means of communication.

Prior to the construction of the Assam-Bengal Railway, communication with the outside world was difficult, as in the dry season the Barāk is navigable only by vessels drawing less than 3 feet of water, and the journey to Calcutta from Silchar took nearly five days. The completion of the railway from Badarpur to Silchar in 1898 reduced the time to thirty-three hours. Badarpur, which is on the Sylhet boundary, is the junction from which the line turns north, and, after crossing the Barāk by a large bridge, winds through the North Cāchār hills into the Assam Valley.

In 1903–4 there were outside the town of Silchar one mile of metalled and 100 miles of unmetalled roads, maintained by the Public Works department, and 6 miles of metalled and 346 miles of unmetalled roads kept up by the local boards, besides 224 miles of bridle-paths. The principal lines of communication are the Sylhet-Manipur road, which passes through the District from Badarpur to Jirighāt; the Dhayarband road, from Silchar to Aijal in the Lushai Hills; the Natwanpur road, which runs along the north of the District to the Sylhet boundary; and the road from Salchāpra, 10 miles west of Silchar, up the valley of the Dhaleswari through Hailākāndi to Kūkicharā. During the rains these roads are incapable of carrying heavy traffic, and tea is usually conveyed down the various rivers with which the District is intersected, and shipped by steamer to Calcutta. The extreme rapidity with which the rivers rise after rain renders the construction of permanent bridges over the larger streams a matter of some difficulty and of great expense. Ferries are in consequence largely used, and there are more than 100 within the District. In the cold season, when the rivers fall, they are often spanned by temporary bamboo bridges.

The steamer service of the District is provided by the India General Steam Navigation Company and the Rivers Steam Navigation Company. Shallow-draught steamers ply on the Barāk in the cold season. During the rainy season there is a regular service of large steamers between Silchar and Calcutta; and feeder-steamers go up the Barāk to Lakhipur, up the

Madhurā to Chandighāt tea estate, up the Ghāgrā to the Hattia rocks, and up the Kātākhāl to Kūkicharā.

District subdivisions and staff.

For administrative purposes the District is divided into three subdivisions: SILCHAR, HAILĀKĀNDI, and NORTH CĀCHĀR. Silchar is in the charge of the Deputy-Commissioner, who usually has three subordinate magistrates and a Sub-Deputy-Collector as his immediate assistants. A member of the Assam Commission is usually posted in the Hailākāndi subdivision, assisted by a Sub-Deputy-Collector, who exercises magisterial powers. The North Cāchār hills are in charge of a European police officer. The staff of the District includes a Forest officer.

Civil and criminal justice.

The Deputy-Commissioner is invested with the special powers contained in sections 30 and 34 of the Criminal Procedure Code, and is authorized to impose sentences of seven years' rigorous imprisonment. The Judge of Sylhet discharges the functions of a District and Sessions Judge in the plains of Cāchār, the Deputy-Commissioner acts as Sub-Judge, and one or more of the assistant magistrates exercise the powers of a Munsif. The High Court at Calcutta is the chief appellate authority; but in the North Cāchār hills its jurisdiction extends only to Europeans charged with criminal offences, and the Deputy-Commissioner exercises the powers of a District and Sessions Judge, appeals lying to the Chief Commissioner. The system of administration in this subdivision is specially adapted to the needs of a primitive people, and the village headmen are allowed to dispose of most civil disputes and all petty criminal cases.

Land revenue.

In the time of the Kachāri Rājās settlement was made, not with the individual, but with a corporate body. The smallest unit recognized by the State was the *khel*, a collection of men often bound together by no ties of race, caste, or religion, who held a piece of land in common. These *khels* were grouped in larger bodies, which were styled the *raj*. Each individual was jointly and severally responsible for the revenue assessed on the *khel*, and similarly each *khel* was responsible for the payments of the *raj*. The earliest rates mentioned are a he-goat, a pair of fowls, a duck, and two coco-nuts from each holding, irrespective of its size. Subsequently, the rate was fixed at about 2½ annas an acre, and in the time of Kārtik Chand raised to 10 annas. Gobind Chand, the last Rājā, is said to have sometimes obtained twice this sum. In addition to these money payments, the villagers were obliged to supply labour for the Rājā's needs, and trade was hampered by high customs duties, market fees, and monopolies.

The first regular settlement of Cāchār, after it came under British administration, was made in 1838–9, for a term of five years, the initial revenue being Rs. 25,000. In 1843–4 a resettlement was made for fifteen years, which was followed by the settlement of 1859, which expired in 1879. The initial revenue at these two settlements was Rs. 43,000 and Rs. 91,000. The rates in 1859 varied from 12 annas to 5 annas per acre. On the expiry of this settlement, a fresh settlement was made for fifteen years. The rates varied from Rs. 1–11 to 12 annas per acre of homestead or cultivated land, excluding land held for tea. Waste was assessed at 3 annas per acre, and the initial revenue was Rs. 2,22,000. The current settlement was made in 1900 for a period of fifteen years. The method of classification adopted is more discriminating than that employed on previous occasions, and distinctions are drawn between good and bad land in the same village. The rates on cultivation vary from Rs. 2–7 to 12 annas per acre. Waste land is assessed at from 6 to 3 annas and tea at a uniform rate of Rs. 2–1 per acre. It was believed on general grounds that the land could pay double the previous rates of revenue without difficulty, but it was determined to limit the enhancement to 50 per cent., and the actual enhancement amounted to only 47 per cent. above the previous revenue demand. The fields were divided into different classes and the revenue adjusted in proportion to their value. In all villages in which the total increase amounted to 33 per cent. or upwards, it will be reached by progressive instalments spread over from eight to twelve years. The initial revenue was Rs. 4,01,000. The system of joint leases, which was well suited to the time when the greater part of the District was covered with jungle, was found to be only a source of inconvenience when the land was cleared and cultivated. At the last settlement these joint estates were broken up, and separate leases issued to each individual for the land to which he was entitled. The average assessment per acre of homestead or garden land is Rs. 2–1, of rice land Rs. 1–11, and of 'dry-crop' land Rs. 1–3.

The land revenue and total revenue of the District are shown in the table below, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	1,99	3,36	4,00	4,79
Total revenue . .	5,02*	7,84	10,67	11,72

* Exclusive of forest revenue.

A special feature of the Cāchār revenue administration has been the grant of land on favourable terms, not only for the growth of tea, but also for the cultivation of the ordinary staples of the Province. Under the former rules leases were issued for twenty to thirty years, with a revenue-free period and low but progressive rates of revenue, which did not, as a rule, exceed 12 annas per acre. The existing rules, which are modelled on those in force in other parts of Assam, do not offer any concessions to the villager who wishes to bring waste land under ordinary cultivation, but a revenue-free period and low rates have been allowed to settlers in the areas disforested in the south of the District.

Local and municipal government. The local affairs of the Silchar and Hailākāndi subdivisions are managed by boards, who exercise the functions usually assigned to them in ASSAM. The presence of a strong European element on the boards adds much to their efficiency, and the Deputy-Commissioner or the subdivisional officer acts as chairman and executive agent. The total expenditure in 1903–4 was about Rs. 1,17,000, the greater part of which was laid out on public works and education. The chief sources of income are local rates, tolls on ferries, and a substantial grant from Provincial revenues. SILCHAR is the only municipal town.

Police and jails. For the prevention and detection of crime, Cāchār is divided into seven investigating centres. The police force in 1904 consisted of 33 officers and 145 men, with 663 *chaukīdārs* or village watchmen. A detachment of the Lakhimpur military police battalion is stationed at Silchar. The District jail at Silchar has accommodation for 84 prisoners.

Education. Education has made more progress in the Cāchār plains than in other parts of the Province. The number of pupils under instruction in 1880–1, 1890–1, 1900–1, and 1903–4 was 3,025, 5,157, 7,900, and 8,090 respectively. That the development of education has been satisfactory is also evident from the fact that the number of pupils at school in 1903–4 was more than three times that of the number twenty-nine years before. At the Census of 1901, 5 per cent. of the population in the plains (9·1 males and 0·4 females) were returned as literate. Only a small proportion of the natives of the North Cāchār hills know how to read and write, and the percentage of literacy in the plains is reduced by the large number of ignorant coolies brought up to the tea gardens. There were 245 primary, 6 secondary, and 2 special schools in the District in 1903–4. The number of female scholars was 298. The enormous majority of the boys

under instruction and all the girls are in the primary stage. Of the male population of school-going age 19 per cent., and of the female population of the same age less than one per cent., were under primary instruction. The total expenditure on education was Rs. 63,000, of which Rs. 13,000 was derived from fees. About 43 per cent. of the direct expenditure was devoted to primary schools.

Hospitals and dispensaries.

Cāchār contains 3 hospitals and 4 dispensaries, with accommodation for 45 in-patients. In 1904 the number of cases treated was 58,000, of whom 500 were in-patients, and 1,300 operations were performed. The expenditure was Rs. 14,000, the greater part of which was met from Local funds.

Vaccination.

Vaccination is compulsory only in Silchar municipality. A staff of vaccinators is employed for work in the District; but in this respect Cāchār is very backward, only 19 per 1,000 having being protected in 1903–4, as compared with 44 per 1,000 for the Province as a whole.

[Sir W. W. Hunter, *A Statistical Account of Assam*, vol. ii (1879); S. C. Banarji, *Settlement Report* (1901); B. C. Allen, *District Gazetteer of Cāchār* (1906).]

Silchar Subdivision.—Head-quarters subdivision of Cāchār District, Eastern Bengal and Assam, lying between 24° 15′ and 25° 8′ N. and 92° 27′ and 93° 16′ E., with an area of 1,649 square miles. The population in 1901 was 301,884, compared with 267,673 in 1891. It contains one town, SILCHAR (population, 9,256), the head-quarters of the District and the principal centre of local trade; and 809 villages. The demand on account of land revenue and cesses in 1903–4 was Rs. 3,81,000. The subdivision consists of a level plain surrounded on three sides by mountains, through the centre of which the Barāk flows in a tortuous course. The surface of the plain is dotted over with low isolated hills called *tīlas*, many of which have been planted with tea. The staple crops are tea and rice, and the former industry is of considerable importance. In 1904 there were 133 gardens with 47,972 acres under plant, which gave employment to 113 Europeans and 49,900 natives. The population is fairly dense, the subdivision supporting 183 persons per square mile, in spite of the fact that more than one-third of the total area is 'reserved' forest, while a considerable portion of the remainder lies too low even for the cultivation of rice. For administrative purposes the subdivision is divided into the three *thānas* of Silchar, Lakhipur, and Kātigarā. The rainfall is heavy even for Assam. At Silchar it is 124 inches in the year, but near the hills it exceeds 160 inches.

Hailākāndi. — Subdivision of Cāchār District, Eastern Bengal and Assam, lying between 24° 12′ and 24° 53′ N. and 92° 26′ and 92° 46′ E., with an area of 414 square miles. It occupies the valley of the Dhaleswari, south of the Barāk, and is separated from Sylhet on the west by the Saraspur Hills. The population in 1891 was 99,869, which by 1901 had risen to 112,897, giving a density of 272 persons per square mile, as compared with 121 in the District as a whole. A large part of the subdivision consists of a flat plain producing rice; but the tea industry is also of considerable importance, and in 1904 there were on the higher ground 31 gardens with 11,353 acres under plant, which gave employment to 27 Europeans and 13,600 natives. The annual rainfall averages about 110 inches, which is considerably less than that recorded in the north of the Cāchār plains. The subdivision contains 269 villages. The head-quarters of the magistrate in charge, who is almost invariably a European, are located at Hailākāndi. The demand on account of land revenue and cesses in 1903–4 was Rs. 1,33,000.

Cāchār, North.—Subdivision of Cāchār District, Assam, lying between 24° 58′ and 25° 50′ N. and 92° 32′ and 93° 29′ E., with an area of 1,706 square miles. The subdivision is a section of the range which divides the Surmā Valley from that of the Brahmaputra. It was through these hills that the Kachāri kings moved from Dimāpur, their capital in the Dhansiri valley, to the plains of Cāchār, and for many years their capital was at MAIBANG, in North Cāchār, on the northern side of the Barail range. Early in the nineteenth century Tula Rām Senāpati, a *chaprāsi* in the employ of the Kachāri Rājā, succeeded in establishing himself here; and till 1854 he and his sons were recognized by the British Government as feudatory chiefs of the desolate tract of jungle lying between the Mahur river on the south and the Jamunā river in Nowgong District on the north. The whole of the subdivision consists of mountainous country, the hills taking the form of serrated ridges, whose sides in their natural condition are clothed with dense evergreen forest. Shifting cultivation is practised, according to which the land, after being twice cropped, is allowed to lie fallow for seven or eight years, when it becomes covered with a dense growth of reeds and bamboo jungle. The population is extremely sparse, and, excluding the persons enumerated by the railway authorities, there were in 1901 only 12 persons per square mile. The population in 1891 was 18,941, which by 1901 had risen to 40,812; but almost the whole of this increase was due to the presence

of a large number of persons engaged on the construction of the railway, who have since left the District. The Assam-Bengal Railway runs through the subdivision, connecting the Brahmaputra Valley with the sea at Chittagong. Its construction was a work of great difficulty and expense, owing to the fact that the hills are largely composed of shale, while the country is covered with jungle, destitute of supplies, and very unhealthy for people working under such conditions as the railway employés. The subdivision is administered by a police officer exercising magisterial powers with head-quarters at HĀFLANG. It contains 254 villages. House tax is assessed in lieu of land revenue. The assessment under this head in 1903-4 amounted to Rs. 6,600. The rainfall is much lighter than in the Cāchār plains, the high wall of the Barail acting as a barrier to the monsoon clouds. At Hāflang the average fall is only 77 inches, and at Maibang farther north 55 inches.

Hāflang.—Head-quarters of the North Cāchār subdivision, in Cāchār District, Eastern Bengal and Assam, situated in 25° 11′ N. and 93° 1′ E. Hāflang stands on the top of a hill, on the north side of the main section of the Barail range. The subdivisional magistrate's court was transferred to this place from Gunjong in 1896, as it then began to acquire considerable importance as the head-quarters of the hill section of the Assam-Bengal Railway. The station is prettily laid out, and commands a fine view of the highest peaks of the Barail and the surrounding ranges. The railway runs round Hāflang hill in a loop nearly 10 miles in length, though the distance through the saddle is less than half a mile. The population in 1901 was 840.

Khāspur.—Village in the Silchar subdivision of Cāchār District, Eastern Bengal and Assam, situated in 24° 55′ N. and 92° 57′ E., near the southern face of the Barail range. This was the capital of the Rājās of Cāchār from the beginning of the eighteenth century to the death of the last Rājā in 1830. While living here the Kachāris came under the influence of Hinduism, and in 1790 the Rājā and his brother entered the body of a copper image of a cow and emerged as Kshattriyas. The only traces of the former capital are to be found in the remains of four temples, two other buildings, and three tanks. The village is no longer of any importance.

Maibang.—Ruins in the North Cāchār subdivision of Cāchār District, Eastern Bengal and Assam, situated in 25° 17′ N. and 93° 9′ E., between two spurs of the Barail Hills on the north side of the watershed. When the Kachāri Rājās were com-

pelled by the aggressions of the Ahoms and the Nāgās to abandon their capital at Dimāpur, and move farther into the hills, they settled at Maibang; but during the first half of the eighteenth century they left that place, and after crossing the Barail, established their court at Khāspur in the plains of Cāchār. In 1882 a man named Sambhudan took up his abode at Maibang, and announced that he had been commissioned by Heaven to restore the Kachāri kingdom. The Deputy-Commissioner, Major Boyd, proceeded with a force of armed police to arrest him; but Sambhudan evaded him and burnt the subdivisional station at Gunjong, which had been left undefended. He then returned and attacked the Deputy-Commissioner. The attack was easily repulsed, but Major Boyd received a severe cut in the hand, which caused his death from tetanus a few days later. Sambhudan was mortally wounded while endeavouring to escape from the police. Maibang is now a station on the Assam-Bengal Railway. Groves of bamboos and the remains of irrigation works show that the place must originally have been densely peopled, but few masonry ruins are now to be seen.

Silchar Town.—Head-quarters of Cāchār District, and of the subdivision of the same name, Eastern Bengal and Assam, situated in 24° 49′ N. and 92° 48′ E., on the left bank of the Barāk river. Silchar used formerly to be extremely inaccessible, as during the dry season only small stern-wheel steamers can ply over the upper waters of the Barāk, and the journey from Calcutta used to take as much as four or five days. The Assam-Bengal Railway has now reduced the time to 33 hours, the route followed being by Goalundo and Chāndpur. During the rainy season a service of large steamers plies between Calcutta and Silchar. The town, though small, has been steadily increasing in size and importance, and the population at the last four enumerations was: (1872) 4,925, (1881) 6,567, (1891) 7,523, and (1901) 9,256. As is the case with many of the towns of Assam, the great majority of the inhabitants are foreigners.

Silchar is very prettily situated and commands a charming view down the Barāk, which is lined with groves of areca-palms and dotted with the sails of native craft, while a little to the north the blue hills of North Cāchār rise sharply from the plain. The heavy rainfall (124 inches) and the comparatively high mean temperature render the climate somewhat oppressive during the rains. The place is subject to earthquakes, and in 1869 some damage was done to the buildings. Another severe

shock was felt in 1882, but the great earthquake of 1897 did comparatively little harm. Silchar is the head-quarters of the District staff, and of the Surmā Valley Light Horse, which in 1904 had a strength of 156 in the District. A detachment of military police is also stationed here. The jail contains accommodation for 76 male and 8 female prisoners, and a hospital provides 33 beds. A clergyman of the Church of England resides here, and there is a branch of the Welsh Presbyterian Mission. Silchar was constituted a municipality in 1893. The receipts and expenditure during the ten years ending 1902–3 averaged Rs. 20,000. In 1903–4 the income and expenditure were Rs. 21,000, the chief sources of income being a tax on houses and lands (Rs. 5,900) and tolls on ferries and markets (Rs. 7,400), while the main items of outlay were conservancy (Rs. 7,000) and public works (Rs. 4,300). Silchar is the industrial and educational centre of the District. A considerable trade is carried on in rice, European piece-goods, timber, and other forest produce, and tea-boxes are manufactured by native firms. There is also a small printing press, at which a vernacular paper is published. The principal educational institution is the high school, which in 1903–4 had an average attendance of 251 pupils.

Boundaries, configuration, and hill and river systems.

Lushai Hills.—District in Eastern Bengal and Assam, lying between 22° 19′ and 24° 19′ N. and 92° 16′ and 93° 26′ E., with an area of 7,227 square miles. It is bounded on the north by Sylhet and Cāchār, and the State of Manipur; on the west by the Chittagong Hill Tracts and the State of Hill Tippera; on the south by Northern Arakan and the Chin Hills; and on the east by the Chin Hills. The whole surface is covered with ranges of hills, which run almost due north and south, with an average height of about 3,000 feet on the west, rising to 4,000 feet farther east, and here and there to over 8,000 feet. The sides of the hills are covered with forest and dense bamboo jungle, except in those places where they have been cleared for cultivation, and a stream or river is invariably to be found in the narrow valleys at their feet. The most important of these rivers are the Tlong or Dhaleswari, the Sonai, and the Tuivol, which drain the northern portion of the country and eventually fall into the Barāk. The southern hills are drained by the Koladyne on the east, with its tributaries the Mat, Tuichang, Tyao, and Tuipui; while the Karnaphuli, at the mouth of which stands Chittagong, with its tributaries the Tuichong, Kao, Deh, Phairang, and Tuilianpui, forms the western drainage system.

The drainage-levels of the country are unusually complicated. The Tlong for some 40 miles of its length runs due north, while parallel to it, on the east the Mat, and on the west the Deh, flow due south. In the same way, the Tuivol and Tuichang and the Tuilianpui and Gutur have parallel courses for many miles, but run in opposite directions. The Tuichong and Phairang flow north till they join the Deh, which then turns west and delivers their combined waters into the Karnaphuli, which flows south-west. Scattered about the District are several plains of considerable size. These have, as a rule, an elevation of about 4,500 feet, and are covered with a thick layer of rich alluvial soil. They are surrounded by hills, which slope gently towards the plain but are generally very steep and often precipitous on the other side. Through the centre runs a sluggish stream, which escapes through a narrow gorge, below which is generally a fall of some height. It has been suggested that these plains are the silted-up beds of lakes, a conjecture which is rendered the more probable by the fact that there are several lakes which at present have no outlet, and which must in course of time silt up till the water overtops the lowest point in the surrounding chain of hills. The largest of these plains is Champhai, which has a length of about 7 miles and at the widest point is nearly 3 miles across.

The hills consist of sandstones and shales of Tertiary age, thrown into long folds, the axes of which run nearly north and south. The rocks are a continuation southwards of those forming the Pātkai range, and were probably laid down in the delta or estuary of a large river issuing from the Himālayas in the Tertiary period. Marine fossils of that age have been found near Lungleh, embedded in nodular dark grey sandstone. Geology.

The hill-sides are generally covered with dense forest or bamboo jungle. Palms, which are common on the lower slopes, give place to various members of the *Ficus* family; and such trees as *gurjan* (*Dipterocarpus turbinatus*), *gugera* or *maku* (*Schima Wallichii*), oaks, chestnuts, and firs grow on the higher ridges. Herbaceous plants are not common, but ferns and orchids are found in large quantities. Botany.

Wild animals include elephants, rhinoceros, tigers, leopards, the Himālayan black bear (*Ursus torquatus*) and the Malay bear (*Ursus malayanus*), bison, several kinds of deer, gural, and serow (*Nemorhaedus*). The *mithan* or *gayāl* (*Bos frontalis*) is kept in domestication. Small game include jungle-fowl and several kinds of pheasant. Fauna.

The valleys are malarious and unhealthy; and during the

Climate and rainfall.

rains the climate, even on the lower hills, is moist and enervating, and malarial fevers are common everywhere. On the higher ridges it is fairly cool and pleasant even at the hottest seasons of the year. In March and April violent storms from the north-west sweep over the hills. The District, like the rest of Assam, enjoys an abundant rainfall. The average fall at Aijal, in the northern hills, is 80 inches in the year, but farther south the precipitation is still heavier, and at Lungleh 131 inches are usually recorded. The rainfall is generally well distributed and the crops seldom suffer from drought.

History.

The history of the Lushai Hills, as far as known, is the history of a backwash or eddy of the great wave of immigration that is generally believed to have started from North-West China and spread over Assam and southwards towards the sea. In the Lushai Hills the movement for the last hundred years has been northwards; and at the beginning of the nineteenth century certain tribes, known as the Old Kūkis, were driven from this country, and, finding no safety in the plains of Cāchār, settled in the hills to the north of the Surmā Valley. Fifty years later there was another immigration of hillmen, called New Kūkis to distinguish them from their predecessors, who were driven from the southern hills by the Lushais, who made their first appearance on the Chātāchara range in 1840. Prior to the advent of the British, the hillmen had been accustomed to make periodical descents upon the plains; and in 1849 four separate raids were committed, one of them on a village within 10 miles of Silchar, in which 29 of the inhabitants were killed and 42 taken captive. These outrages were followed by an expedition led into the hills by Colonel Lister, who in 1850 surprised and destroyed the village of Mullah, one of the chiefs concerned in the raid. This demonstration kept the hillmen quiet for some years; but in 1862 they broke out afresh, and the diplomatic efforts that followed had little practical effect. In the cold season of 1868–9 raids were made on Manipur and Sylhet, and the Noārband and Maniārkhāl tea factories in Cāchār were burnt and plundered. An expedition was dispatched into the hills, but it started too late in the season and failed to inflict the punishment required. In January, 1871, a determined raid was made down the Hailākāndi valley. The village of Ainākhāl was burnt and twenty-five persons killed, the Alexandrapur tea factory was destroyed, a tea planter—Mr. Winchester—murdered, and attacks were made upon four other tea gardens with varying success. The raiders were eventually driven off, but not before they had succeeded in killing twenty-seven

persons in addition to those already mentioned, seven of whom were sepoys sent to protect the outlying gardens. Raids were also made on Sylhet, Hill Tippera, and Manipur. Such violent and ferocious forays called for vigorous measures of repression, and in the cold season of 1871–2 two columns were sent into the hills, one from Chittagong, the other from Cāchār. This expedition was completely successful, and the peace of the Assam frontier remained undisturbed for the next twenty years.

In 1888 two serious raids were committed in the Chittagong Hill Tracts. In one the attacking party killed Lieutenant Stewart and two corporals of his regiment; in the other they cut up the inhabitants of a village located only 8 miles from Demāgiri. The following cold season a small force was sent into the hills to exact reparation for these outrages, and a stockaded post was built at Lungleh and garrisoned by 200 men. This demonstration of military activity had little effect upon the Lushais; and at the very time when the expedition was in the hills, Lianphunga, a son of Sukpilal, dispatched a raiding party which devastated the Chengri valley on the Chittagong frontier. Prompt measures for reprisal were taken, and columns were dispatched into the hills from Silchar and Chittagong during the following cold season. The captives were surrendered and the offending village burnt; but the British Government had at last come to the decision that here, as elsewhere, the only effective method of protecting the frontier was the establishment of fortified posts in the hills themselves. Stockades were accordingly erected at Fort Tregear in the South Lushai Hills, and at Aijal and Changsil in North Lushai. A Political officer, Captain Browne, was stationed in the northern hills, and at first all seemed progressing favourably. Suddenly, without a word of warning, the Lushais rose in September, 1890, attacked the two stockades, and killed Captain Browne, who was marching along the road with an escort of four sepoys. A force was immediately sent up from Cāchār, and though Lieutenant Swinton, the officer in command, was killed, Aijal and Changsil were relieved without delay. Active operations were then commenced, and within two months only one of the western chiefs responsible for this disturbance was at large. On April 1, 1891, the South Lushai Hills, which had been controlled by an Assistant Political officer under the Commissioner of Chittagong, were formed into a District and placed under a Superintendent.

At the beginning of 1892 the Lushai country was to all

appearances in a condition of profound peace, when Mr. McCabe, the Political officer of North Lushai, proceeded to the village of a chief named Lalbura, who had declined to comply with a requisition sent to him for coolies. He was attacked there by a party of Lushais; but they were driven off, and a force of police was then sent to the hills east of the Sonai, as the chiefs in this quarter had assisted Lalbura in his rising. Captain Shakespear, the Superintendent of the South Lushai Hills, heard of the attack on Mr. McCabe, and marched northwards to his assistance. When he reached Vansanga's village, the whole country rose in arms, and he was compelled to entrench himself and act on the defensive. The Lushais made constant attacks upon his camp, attempted Lungleh, threatened Demāgiri, cut the telegraph wires, and spread themselves over the line of communications. Captain Shakespear was relieved by a column dispatched from Burma, and the combined forces then proceeded to inflict such punishment as they could during the short time that their scanty supplies enabled them to remain in the field. In December, 1892, a punitive expedition was dispatched into the hills, which co-operated with a column sent from Aijal, and impressed upon the rebellious villages a sense of the futility of attempting to resist the British Government. No active opposition was encountered, and since that date the peace of the District has been undisturbed. In 1898 the South Lushai Hills were transferred to the Assam Administration, and the District for the first time took its present form.

The people.

The first complete Census of the Lushai Hills was taken in 1901, and disclosed a population of 82,434, living in 239 villages. The following table gives, for each subdivision, particulars of area, villages, population, &c. :—

Subdivision.	Area in square miles.	Number of villages.	Population.	Population per square mile.	Number of persons able to read and write.
Aijal . .	4,701	125	52,936	11	} 2,058
Lungleh . .	2,526	114	29,498	12	
District total	7,227	239	82,434	11	2,058

The hills are very sparsely peopled, and support only 11 persons per square mile. An unusual feature in the constitution of the population is the great preponderance of females, there being 1,113 women to every 1,000 men. More than 95

per cent. of the people profess no other creed than Animism, and a little more than 4 per cent. are Hindus. All of these Hindus are foreigners, most of them being members of the military police battalion and their dependents. The number of the native Christians is still very small (26), but it was only in 1897 that the Welsh Presbyterian Mission undertook to carry on the work which had been begun by two pioneer missionaries. About 87 per cent. of the population of the hills returned Lushai or Dulien as their usual form of speech, a language which is akin to the 'Old Kūki' dialect Rangkhol, and to various forms of speech used by the Nāgā tribes. Agriculture was the means of support of 93 per cent. of the population in 1901.

Tribal organization. The inhabitants of the hills are said to be all members of the same race, but are divided up into a number of families or clans. These clans are distinguished from one another by differences in sacrificial ritual and in some cases by differences in dialect, but all enjoy the *ius connubii*. The principal subdivisions are the Lushais (36,400), who supply chiefs to nearly every village in the hills; the Poi (15,000), or immigrants from the Chin Hills; the Hmar (10,400), or tribes who have come from Manipur; and the Ralte (13,800), Paithe, Thado, and Lakher. The other groups into which the population is divided are rapidly losing their distinctive traits.

Physical appearance and clothing. The Lushais, to apply one generic term to all the inhabitants of the hills, are a short and sturdy race, with countenances of a distinctly Mongolian type, and well-developed legs. The men seldom have hair upon their faces, and pick out what little grows, with the exception of a few shoots at the corners of the mouth. Both sexes draw their hair tight back and tie it in a knot, and wear a coat which reaches below the waist, and a shawl thrown over the shoulders. Women, in addition, wear a blue petticoat, falling to the knee, and ivory rings about 1½ inches in diameter in their ears. Amber necklaces and rough uncut carnelians are highly prized. Their arms are flint-lock muskets, *daos* or billhooks of the Burmese pattern, and an inferior kind of spear.

Constitution of society. The people live in villages, each of which is ruled by a chief, who is entirely independent. The chief is supreme; but if his subjects dislike his system of administration, they move elsewhere. He settles all disputes, decides where the village is to cultivate, and when and where it shall be moved. His house is the poorhouse of the community, and orphans and indigent persons live there and get food in return for labour. The

other officials are the *upa* or councillors, the crier, the blacksmith, and the *pui-thiam* or sorcerer.

Villages and houses.

Villages are generally built on the top of a ridge or spur, and before the British occupation of the hills were strongly stockaded. The houses are laid out in streets radiating from a central square, in which stand the chief's house and the house where strangers and the young unmarried men of the village sleep. They are built on piles on the natural slope of the hill, and at the end nearest the road is a rough platform of logs. The doorway has a high sill, and the door consists of a sliding panel of bamboo work. On each side of the fireplace are bamboo sleeping platforms, and beyond is a kind of lumber room, from which a door opens on a small back veranda. Windows in the side of the house are considered unlucky, unless the right to make them has been purchased by killing two *mithan* and feasting the village—a curious instance of a savage form of window tax, and an example of the material gains accruing from many of the religious beliefs and superstitions of the hill tribes of Assam. The posts used are of timber, but the walls, floors, and roof frame are made of bamboo. The roof is generally thatched with cane leaves, tied down with broad bands of split bamboo.

Marriage.

In spite of the fact that women exceed the men in numbers, the Lushai bachelor has to pay heavily for his wife. The price paid to the father or nearest male relative of the girl varies from three to ten *mithan*, for it is always stated in terms of these animals, though cash or other articles may actually be given in their place. But the father is by no means the only person whose demands have to be satisfied. The girl's aunt receives from Rs. 5 to Rs. 40, the nearest male relative on her mother's side from Rs. 4 to 40, the eldest sister gets a small sum as a reward for having carried about the bride when young, and there are also the male and female protectors of the bride to each of whom a present must be given. The result is that it not unfrequently happens that a man dies with his obligations still undischarged, and leaves to his children the task of paying for their mother. The essential part of the marriage ceremony is a feast to the friends and relations, and the sacrifice of a fowl by the *pui-thiam*. For some time after the wedding the bride sleeps with her husband, but returns every day to her father's house. Divorce by mutual consent is recognized; but under these circumstances the husband recovers no part of the bride's price, so that he has every inducement to make the best of the lady he has chosen. Unmarried girls are not

expected to remain chaste; but if a lover begets a child, he is required to pay one *mithan* to its maternal grandfather, unless he marries the object of his affections, when the ordinary bride price only is charged. Among the Paithes the marriage ceremony is not performed till the woman has given evidence of her fertility. If she remains barren, the match is broken off. During the first seven days of its life, the spirit of a child is supposed to spend part of its time perched on the bodies of both its parents, and for fear of injuring it they have to keep quiet during this period. By this means primitive man ensures that the mother shall have a short period of repose.

Funeral rites.

After death, the corpse is dressed in its best clothes and fastened to a bamboo frame in a sitting posture. A big feast is then given to the friends and neighbours, and food and drink are offered to the corpse. On the evening following the death, the body is interred just opposite the house, the grave consisting of a shaft about 4 or 5 feet deep, from which a tunnel branches off in which the corpse is placed. People who belong to wealthy families are not buried at all. They are placed in a hollow tree-trunk, the lid of which is carefully plastered with mud, and put beside a fire in the centre of the house. A hollow bamboo connects the coffin with the earth, and drains off liquid matter. The nearest relatives sit beside the coffin and drink rice-beer, and at the end of three months the bones are collected and stored in a basket. The Paithes smear a greasy preparation over the corpse, which preserves and hardens the skin. It is then dressed up, and in the evening is brought out, and rice-beer is poured down its throat, while the people sing and dance around it. This disgusting performance is sometimes kept up for several months.

Religion.

The religion of the Lushais is of the usual animistic kind. They believe in a Creator, who does not trouble himself much with the subsequent fate of the world he has created, and most of their religious energies are devoted to the propitiation of the evil spirits, who are supposed to be the cause of all misfortune. Like many of the other hill tribes, they recognize two degrees of happiness after death—the greater joy being reserved for those who have killed men or animals in the chase, or have feasted the village. Women can only enter this abode of bliss if taken there by their husbands, so a premium is placed on wifely obedience and devotion. Existence in the ordinary spirit world is thought to be far from pleasant. After a certain time, the soul is born again in a hornet, and presently is

converted into water. If in the form of dew it falls upon a man, it is born again on the earth in the shape of his child.

Inheritance.

In wealthy families when a son marries he receives a certain number of houses and becomes an independent chief. At the same time a share of his father's guns, necklaces, and other valuables and slaves are made over to him. The youngest son remains with his father till his death and then succeeds to the village. Much the same custom prevails among the common people.

Agriculture.

Like other hill tribes, the Lushais follow the system of *jhūm* cultivation. The jungle growing on the hill-side is cut down and burnt, the ground is cleared of logs which were too large to burn, and the seeds of rice, maize, millet, vegetables, and cotton are dibbled in among the ashes. The largest yield is obtained from land which has just been cleared of virgin forest, or which has not been disturbed for forty or fifty years. Land that bears a heavy growth of bamboo jungle is also highly esteemed, but hill-sides covered with *ikra* (*Saccharum arundinaceum*) and grass are said to yield very poor harvests, though good crops are obtained from such land in the Nāgā Hills. The only agricultural implements used are *daos*, axes, and hoes. The *dao* is a knife with a triangular blade about three inches wide at the end and half an inch wide at the handle, which is used to cut down the jungle and to make the holes in which the seeds are planted. The axes and hoes are small and light. It is only where land has not been cultivated for many years that a crop of rice is taken from it in two successive seasons, though peas and beans are often sown on *jhūms* cleared in the previous year. Land covered with bamboos can be cropped every fourth year, but land under forest is allowed six to nine years' rest. The cultivation is thus of a migratory character, and the villages are shifted at intervals of about five years to enable the cultivator to live near his fields. The area under cultivation is not known, and there are no means of estimating its extension or decrease. Little attempt has as yet been made to improve the existing staples or to introduce new varieties. The cultivation of irrigated rice has, however, been tried in various parts of the District, and has been adopted by a few of the Lushais.

Live stock.

The live stock include tame *mithan*, pigs, goats, and dogs. Pigs are carefully tended, and treated almost as pets; the goats are of the long-haired hill breed. Dogs are used for food, and are said to be similar to those eaten by the Chinese. They are of medium size, with long yellow hair, short legs,

a bushy and tightly curled tail, and a pointed nose, and are in great requisition for sacrificial purposes.

Minerals.

The District has never been properly explored by a geologist; but the officer of the Geological Survey department who accompanied the expedition of 1889–90 found no traces of coal, limestone, or other minerals of economic value either in the rocks through which the road was cut or in the débris brought down by the rivers.

Manufactures and trade.

The only articles manufactured in the District are earthen pots and pipes, the *daos*, hoes, and axes required for cultivation, and cotton cloths. These cloths are woven from yarn spun from homegrown cotton, and are superior to those usually manufactured by hill tribes. They are, however, produced only in sufficient quantities to clothe the members of the family, and are seldom sold. Such trade as exists is in the hands of Bengalis or merchants from Rājputāna, and there are only two or three Lushai shopkeepers in the whole District. The principal imports are food-stuffs, cloth, iron, *daos*, brass pots, and umbrellas, while forest produce is exported.

Means of communication.

A bridle-path runs from Silchar to Aijal, the head-quarters of the District, a distance of 120 miles; but heavy goods are usually brought up the Dhaleswari river to Sairang, 13 miles from Aijal. The journey between Silchar, the place at which passengers usually embark, and Sairang occupies from twelve to twenty-one days up and from four to six days down-stream. Bridle-paths run from Aijal to Falam, Lungleh, and North Vanlaiphai, and from Lungleh to Haka and Demāgiri, on the route to Chittagong. Altogether 4 miles of cart-roads and 542 miles of bridle-paths were maintained in 1903–4.

Famine.

The country never suffers from want of rain, but in 1881 there was scarcity, due to the depredations of rats. In the previous season the bamboos had seeded, and the supply of food thus provided caused an immense multiplication in the numbers of these rodents, which, when they had exhausted the bamboo seed, devoured the rice crop. The Lushais descended into the Surmā Valley in search of work and food, and Government sent about 750 tons of rice into the hills.

District subdivisions and staff.

For general administrative purposes the District is divided into two subdivisions: AIJAL, under the immediate charge of the Superintendent of the Hills, who is a member of the Assam Commission; and LUNGLEH, under a European police officer. Public works are in charge of a District Engineer, who is under the orders of the Superintendent of the Hills, and a Civil Surgeon is stationed at Aijal. The political organization of

the Lushais themselves is much in advance of that usually found among the hillmen of Assam. Their chiefs possess considerable influence and power, and the Government is thus able to deal with responsible individuals. Advantage has been taken of this in the internal administration of the District. The Aijal subdivision is divided into twelve and the Lungleh subdivision into six circles. In each of these circles an interpreter is stationed, through whom all orders are transmitted to the village chiefs, and who is responsible for seeing that these orders are carried out. He is also required to submit regular reports on all events occurring within the circle and on the state of the crops. In each village a writer has been appointed, who prepares and keeps up a house list, and in return for this is exempted from payment of house tax and from labour on the roads. The chiefs and headmen of villages are held responsible for the behaviour of the people, their authority is upheld by Government, and litigation generally and any tendency to appeal against the orders of the chiefs in petty cases are discouraged.

Civil and criminal justice.

All criminal and civil cases which are not disposed of by the chiefs themselves are heard by the Superintendent and his assistants. The Superintendent exercises powers of life and death, subject to confirmation by the Lieutenant-Governor, who is the chief appellate authority. The High Court at Calcutta has no jurisdiction in the hills, except in criminal cases against Europeans.

Revenue.

Land revenue is not assessed, but the people pay a tax of Rs. 2 a house. In addition to this money tax, the Lushais are required to provide labour when required by Government, but the coolies so employed receive the liberal wage of 8 annas a day.

Police and jails.

The civil police force includes 2 sub-inspectors and 49 head constables and men; but the real garrison of the District consists of a battalion of military police, under three European officers, with a sanctioned strength of 800 officers and men. A small jail at Aijal has accommodation for 13 prisoners.

Education.

In 1903–4 there were two schools at Aijal, one maintained by Government, and one by the Welsh Presbyterian Mission; and Government schools at Lungleh and Khawmbawk. The total number of pupils in the Government schools was only 175, and the expenditure on education amounted to Rs. 3,524, the greater part of which was met from Provincial revenues. For a savage tribe who have so recently come under British rule, the Lushais show a considerable aptitude for civilization. In

1901, 2·5 per cent. of the population (5·1 males and 0·1 females) were able to read and write, a proportion much higher than in Manipur or in the Nāgā or Gāro Hills. This difference is probably due to the aristocratic organization of their community. When arrangements were being made for the Census of 1901, it was found that some villages had not a single literate person to act as enumerator. A man was then selected by the chief and sent to head-quarters, in order to be taught how to read and write.

Hospitals and dispensaries.

The District possesses 7 dispensaries and 5 military police hospitals, with accommodation for 144 in-patients. In 1904 the number of cases treated was 34,000, of whom 1,200 were in-patients, and 300 operations were performed. The expenditure was Rs. 14,400, which was entirely met from Provincial revenues.

Vaccination.

Vaccination is not compulsory in any part of the District, and the Lushais have not suffered sufficiently from small-pox to be fully alive to its value as a prophylactic. In 1903-4 only 20 per 1,000 of the population were vaccinated, a figure far below the average for the Province as a whole.

[B. C. Allen, *Gazetteer of the Lushai Hills* (1906). A monograph on the Lushais is under compilation.]

Aijal Subdivision.—Subdivision of the Lushai Hills District, Eastern Bengal and Assam, lying between 23° 1′ and 24° 19′ N. and 92° 16′ and 93° 26′ E., with an area of 4,701 square miles. The population in 1901, the first year in which a census was taken, was 52,936, living in 125 villages. The head-quarters of the District are at AIJAL village.

Lungleh.—Subdivision of the Lushai Hills District, Eastern Bengal and Assam, lying between 22° 19′ and 23° 23′ N. and 92° 21′ and 93° 10′ E., with an area of 2,526 square miles. The population in 1901, the first year in which a census was taken, was 29,498, living in 114 villages. The head-quarters of the subdivision are at Lungleh village.

Aijal Village.—Head-quarters of the Lushai Hills District, Eastern Bengal and Assam, situated in 23° 44′ N. and 92° 44′ E., on the top of a narrow ridge about 3,500 feet above the sea. It is connected by a bridle-path with Silchar, 120 miles distant; but stores are usually brought up the Dhaleswari river to Sairang, only 13 miles from Aijal. The station was established in 1890, and in 1901 had a population of 2,325. The rainfall (80 inches) is not excessive for Assam, and the climate is cool and pleasant. Aijal is the head-quarters of the Superintendent and his staff, and of a military

police battalion under a European commandant. There is a jail with accommodation for 13 prisoners, and a hospital with 34 beds. For some time much difficulty was experienced in obtaining water at the top of the hill, but arrangements have now been made at considerable expense to catch and store the rain-water. The bazar contains the shops of several traders from various parts of India.

Boundaries, configuration, and hill and river systems.

Nāgā Hills.—District in Eastern Bengal and Assam, lying between 24° 42′ and 26° 48′ N. and 93° 7′ and 94° 50′ E., with an area of 3,070 square miles. It is bounded on the north by Nowgong and Sibsāgar; on the west by the North Cāchār hills; on the south by the State of Manipur; and on the east by a line which follows for the most part the course of the Dikho and Tizu rivers, beyond which lie hills inhabited by independent tribes. The District consists of a long narrow strip of hilly country. The Barail range enters it from the west, and the Jāpvo peak a little to the south of Kohīmā attains a height of nearly 10,000 feet. Here it is met by the meridional axis of elevation prolonged from the Arakan Yoma, and from this point the main range runs in a north-north-easterly direction. The general effect is that of a gigantic L in the reverse position, the junction of the two arms forming an obtuse instead of a right angle, with minor ridges branching off on either side towards the east and west. The hills generally take the form of serrated ridges, clothed for the most part with dense forest and scrub and grass jungle, and separated from one another by deep valleys, through which a stream or river makes its way to the plains. The largest river in the District is the Doiāng, but it is only navigable for a few miles within the hills. The channel is blocked by rocks at Nabha, or boats could proceed as far as the Mokokchūng-Wokhā road. The DIKHO is also navigable for a short distance within the hills, though the head-hunting proclivities of the tribes inhabiting the right bank might render the voyage dangerous; but the same cannot be said of the JHĀNZI and Disai, which flow through the plains of Sibsāgar into the Brahmaputra. East of the watershed is the Tizu with its tributary the Lanier, which falls into the Chindwin.

Geology.

The hills have never been properly explored, but they are believed to be composed of Pre-Tertiary rocks, overlaid by strata of the Tertiary age.

Botany.

The flora of the Nāgā Hills resembles that of Sikkim up to the same altitude. In their natural state the hills are covered with dense evergreen forest; and where this forest has been

cleared for cultivation, high grass reeds and scrub jungle spring up in great profusion.

The usual wild animals common to Assam are found, the list including elephants, tigers, leopards, bears, bison (*Bos gaurus*), serow, *sāmbar* and barking-deer, and the flying lemur (*Nycticelus tardigradus*). A horned pheasant (*Tragopan blythi*) has been shot in the hills. Fauna.

The climate generally is cool, and at Kohīmā the thermometer seldom rises above 80°. The higher hills are healthy, but during the rains the valleys and the lower ranges are decidedly malarious. The rainfall, as in the rest of Assam, is fairly heavy. At Kohīmā it is 76 inches in the year, but farther north, at Wokhā and Tamlū, it exceeds 100 inches. Climate and rainfall.

The earthquake of June 12, 1897, was distinctly felt, but not much damage was done, and there is no record of any serious convulsion of nature having ever occurred in the District.

Of the early history of the Nāgās, as of other savage tribes, very little is known. It is interesting, however, to note that Tavernier in the latter half of the seventeenth century refers to people in Assam, evidently Nāgās, who wore pigs' tusks on their caps, and very few clothes, and had great holes for earrings through the lobes of their ears, fashions that survive to the present day. In the time of the Ahom Rājās they occasionally raided the plains, but the more powerful princes succeeded in keeping them in check, and even compelled them to serve in their military expeditions. The first Europeans to enter the hills were Captains Jenkins and Pemberton, who marched across them in 1832. The story of the early British relations with these tribes is one of perpetual conflict. Between 1839 and 1851 ten military expeditions were led into the hills, the majority of which were dispatched to punish raids. After the last of these, in which the village of Kekrimā, which had challenged the British troops to a hand-to-hand fight, lost 100 men, the Government of India decided upon a complete withdrawal, and an abstention from all interference with the hillmen. The troops were recalled in March, 1851; and before the end of that year 22 Nāgā raids had taken place, in which 55 persons were killed, 10 wounded, and 113 taken captive. The policy of non-interference was still adhered to, but the results were far from satisfactory; and between 1853 and 1865, 19 raids were committed, in which 233 British subjects were killed, wounded, or captured. The Government accordingly agreed to the formation of a new District in 1866, with head-quarters History.

at Sāmaguting. Captain Butler, who was appointed to this charge in 1869, did much to consolidate British power in the hills, and exploration and survey work were diligently pushed forward. These advances were, however, resented by the tribesmen; and in February, 1875, Lieutenant Holcombe, who was in charge of one of the survey parties, was killed, with 80 of his followers. Butler himself was three times attacked, and was mortally wounded the following Christmas Day by the Lhotā Nāgās of Pangti. Two years later his successor, Mr. Carnegy, was accidentally shot by a sentry, when occupying the village of Mozema, which had refused to give up the persons guilty of a raid into North Cāchār. In 1878 it was decided to transfer the head-quarters of the District to Kohīmā, in the heart of the Angāmī country. During the rains of 1879 indications of trouble began to present themselves; and before starting on his cold-season tour the Political Officer, Mr. Damant, determined to visit the powerful villages of Jotsomā, Khonoma, and Mozema. On reaching Khonoma, he found the gate of the village closed, and as he stood before it, he was shot dead. The Nāgās then poured a volley into his escort, who turned and fled with a loss of 35 killed and 19 wounded. The whole country-side then rose and proceeded to besiege the stockade at Kohīmā, and the garrison were reduced to great straits before they were relieved by a force from Manipur. A campaign against the Nāgās ensued, which lasted till March, 1880. The most notable event in this campaign was a daring raid made by a party of Khonoma men, at the very time when their village was in the occupation of British troops, upon the Bālādhan garden in Cāchār, where they killed the manager and 16 coolies and burnt down everything in the place. Within the short space of five years four European officers while engaged in civil duties had come to a violent end; but the Nāgās had begun to learn their lesson, and under the able administration of Mr. McCabe the District was reduced to a condition of peace and order. In 1875 a subdivision was opened at Wokhā to exercise control over the Lhotā Nāgās, who on several occasions had attacked survey parties sent into the hills. Fourteen years later it was found possible to withdraw the European officer stationed there, and a subdivision was opened at Mokokchūng in the Ao country. In 1898 the Mīkīr and Rengmā Hills, with the valley of the Dhansiri, which formed the most northerly part of the District as originally constituted, were transferred to Nowgong and Sibsāgar, as, on the completion of the Assam-Bengal Railway,

it was found more convenient to administer this tract of country from the plains than from Kohīmā. Lastly, in 1904, the tract formerly known as the 'area of Political control' was formally incorporated in the District, and the boundary was pushed forward to the Tizu river, and even across it on the south so as to include four small Angāmī villages on the farther bank.

The people.

A census of the hills was first taken in 1891, when the population was 96,637; in 1901 the number had risen to 102,402. The tract subsequently incorporated within the District contains about 30,000 persons. There are two subdivisions, KOHĪMĀ and MOKOKCHŪNG, with head-quarters at places of the same names; and in 1901 the District contained one town, KOHĪMĀ (population, 3,093), and 292 villages. The following table gives, for each subdivision, particulars of area, population, &c. The large increase which occurred in Mokokchūng between 1891 and 1901 is due partly to immigration and partly to the addition of new territory.

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Kohīmā . .	2,337	1	224	68,619	29	− 2·3	1,380
Mokokchūng .	733	...	68	33,783	46	+ 27·9	
District total	3,070	1	292	102,402	33	+ 5·9	1,380

Nearly 96 per cent. of the population in 1901 were still faithful to their various forms of tribal religion. The American Baptist Mission has branches at Kohīmā and at Impur in the Mokokchūng subdivision, and practically the whole of the native Christians (579) were members of this sect. The Nāgās do not at present seem to be attracted to either Hinduism or Christianity. Both of these religions would, in fact, impose restraints upon their ordinary life, and would debar them from many pleasures, such as the consumption of beef and liquor, and a certain latitude in their sexual relations to which they have grown accustomed.

The various languages of the Nāgā group, though classified under one generic head, differ very widely from one another, and in some cases the language spoken in one village would not be understood by people living only a short distance away. Angāmī, Chunglī, and Lhotā are in most general use. The

principal tribes are the Angāmīs (27,500), the Aos (26,800), the Lhotās (19,300), and the Semās, who form the greater part of the population in the newly added territory.

Origin and affinities.

The term Nāgā is applied by the Assamese to a number of different tribes, the majority having as yet made little progress on the path of civilization, who occupy the hills between the Brahmaputra Valley and Burma on the north and south, the Jaintiā Hills on the west, and the country inhabited by the Khamtis and Singphos on the east. The Nāgās, like the rest of the tribes of Assam, belong to the great Tibeto-Burman family, but they are differentiated from most of the other sections of the horde by their warlike and independent spirit and by their indifference to the sanctity of human life. Among the Nāgās, society is seen resolved into almost its ultimate unit; and, though they are divided into several different tribes, it must not be supposed that the tribe is the basis upon which their society has been organized. The most warlike and important tribe are the Angāmīs, who occupy the country round Kohīmā. North of them come the Rengmās, then the Lhotās, while north and east of the Lhotās are the Aos, whose villages stretch up to the Dikho river. On the farther side of this river are a number of tribes with which we are at present but imperfectly acquainted, but the Semās live east of the Rengmās and the Aos.

Organization.

The Nāgās, as a whole, are short and sturdy, with features of a markedly Mongolian type. The Lhotās are exceptionally ugly, and among all the tribes the average of female beauty is extremely low. The people, as a rule, are cheerful and friendly in times of peace, and are musically inclined. As they march along the roads they keep time to a chant, which is varied to suit the gradient and the length of step; and they sing as they reap their rice, their sickles all coming forward in time to the music. East of the Dikho there are chiefs who enjoy certain privileges and exercise authority over their villages, and chiefs are also found among the Semā tribe. These chiefs hold their position by right of inheritance, and, as among the Lushais, the sons, as they grow up, move away and found separate villages. The ordinary Nāgā village is, however, a very democratic community, and the leaders of the people exercise comparatively little influence. They are noted for their skill in war or in diplomacy, or for their wealth; but their orders are obeyed only so far as they are in accord with the inclinations of the community at large, and even then the wishes of the majority are not considered binding on the weaker party. Among the

Angāmīs, in fact, the social unit is not the village, but the *khel* (a term borrowed from the Afghān border), an exogamous subdivision of which there are several in each village. There is great rivalry between the *khels*, which, prior to British occupation, led to bitter blood-feuds. The following extract from the report of the Political officer in 1876 shows the utter want of unity in an Angāmī Nāgā village:—

'In the middle of July a party of forty men from Mozema went over to Kohīmā and were admitted by one of the *khels* friendly to them, living next to the Puchatsuma quarter, into which they passed and killed all they could find, viz. one man and twenty-five women and children. The people of the other *khels* made no effort to interfere, but stood looking on. One of the onlookers told me that he had never seen such fine sport as the killing of the children, for it was just like killing fowls.'

This extraordinary separation of *khel* from *khel* is the more remarkable, in that they must all be intimately connected by marriage, as a man is compelled to take his wife from some *khel* other than his own.

Villages and houses. The villages are, as a rule, built on the tops of hills, and, except among the Semās, are of considerable size, Kohīmā containing about 800 houses. They are strongly fortified and well guarded against attack. The houses are built closely together, in spite of the frequency of destructive fires. The posts and rafters are of solid beams, and the roof at the sides reaches nearly to the ground. Those of the Lhotās and Aos are laid out in regular streets, but there is a complete lack of symmetry in the Angāmī and Semā villages.

Dress and food. Among the naked Nāgās the men are often completely destitute of clothing, and it is said that the women when working in the fields sometimes lay aside the narrow strip of cloth which is their solitary garment. At the opposite end of the scale come the Angāmīs, whose dress is effective and picturesque. Their spears and *daos* are ornamented with red goats' hair, and they wear gaiters and helmets of dyed cane, and brightly coloured sporrans. The Aos, too, have a nice taste in dress. But the Lhotās are an untidy dirty tribe; and the working dress for a man consists of a small cloth passed between the legs and fastened round the waist, which barely serves the purpose for which it is intended, while a woman contents herself with a cloth, about the size of an ordinary hand towel, round her waist. Both sexes are fond of ornaments, and use pigs' tusks, sections of an elephant's tusk, agates, carnelians,

necklaces of beads, shells, and brass ear-rings. The weapons used by all the tribes are spears, shields, and *daos*, or billhooks. Their staple food is rice, but few things come amiss to a Nāgā, and they eat pigs, bison, dogs, *gui* (big lizards), and pythons, and any kind of game, however putrid. Like other hill tribes, they are great drinkers of fermented beer.

Oaths. Oaths are generally confirmed by invoking the wrath of Heaven on the swearer if he tells a lie. An Angāmī who has sworn by the lives of his *khel* will never tell a lie. He bares one shoulder, and places his foot in a noose in which a piece of cow-dung has been placed before taking the oath. The most careful supervision is, however, necessary to ensure that the correct formula is employed, as by some verbal quibble he may exempt himself from all liability. The vanquished, too, occasionally eat dirt in a literal sense as testimony to the sincerity of their vows.

Marriage customs. Adult marriage only is in vogue, and prior to the performance of that ceremony the girls are allowed great latitude. Those of the Aos sleep in separate houses two or three together, and are visited nightly by their lovers. These lovers are, as a rule, members of the girl's own *khel*, whom she is debarred by custom from marrying; and, as illegitimate children are rare, it is to be presumed that abortion and infanticide are not unknown. The former practice is in vogue among the Aos, while of the Angāmīs it was said to have been the rule for the girl to retire alone into the jungle when she felt her time approaching, and strangle the baby, when it was born, with her own hands. The other tribes are not quite so frankly promiscuous as the Aos, but a Nāgā bride who is entitled to wear the orange blossom of virginity on the occasion of her marriage is said to be extremely rare. The following is a description of the marriage ceremony of the Angāmīs: The young man, having fixed his choice upon a certain girl, tells his father, who sends a friend to ascertain the wishes of her parents. If they express conditional appproval, the bridegroom's father puts the matter further to the test by strangling a fowl and watching the way in which it crosses its legs when dying. If the legs are placed in an inauspicious attitude, the match is immediately broken off; but if this catastrophe is averted, the girl is informed of the favourable progress of the negotiations. At this stage, she can exercise a power of veto, as, if she dreams an inauspicious dream within the next three days, her suitor must seek a bride elsewhere; but if all goes favourably, the wedding day is fixed. Proceedings open with a feast at the bride's house, and in the

evening she proceeds to her husband's home; but, though she sleeps there, he modestly retires to the bachelors' club. The next day brings more feasting, but night separates the young couple as before. On the third day they visit their fields together, but not till after eight or nine days have elapsed is the village priest called in, and the happy pair allowed to consummate their wishes. The Angāmīs and the Aos do not, as a rule, pay money for their wives, but among the Lhotās and the Semās the father of the girl generally receives from 80 to 100 rupees. Divorces are not uncommon, especially in the case of the Angāmīs, who do not take more than one wife at a time. Widows are allowed to remarry, but those of the Angāmī tribe are expected to refrain from doing so if they have children.

Funeral rites. The dead are, as a rule, buried in shallow graves in close vicinity to their homes. The funeral is an occasion for much eating and drinking, and among the Angāmīs the whole of a man's property is sometimes dissipated on his funeral baked meats. The friends of the deceased lament vociferously round the grave till the coffin has been lowered. The conclusion of the ceremony is thus described by the late Mr. McCabe, the officer who had most to do with the pacification of the hills:—

'At this stage of the proceedings, the friends of the deceased suddenly stopped sobbing, dried their eyes, and marched off in a most businesslike manner. A civilized Nāgā, who had been as demonstrative with his umbrella as his warrior friends had been with their spears, solemnly closed it and retired. A large basketful of *dhān* (rice), millet, *dāl* (pulse), and Job's-tears was now thrown into the grave, and over this the earth was rapidly filled in.'

The Aos, however, do not bury their dead, but place them in bamboo coffins and smoke them for a few weeks in the outer room of the house. The corpse is then removed to the village cemetery, and placed on a bamboo platform. This cemetery invariably occupies one side of the main road leading to the village gate.

Inheritance and religion. During the father's lifetime his sons receive shares of his landed property as they marry, with the result that the youngest son usually inherits his father's house. The religion of the Nāgās does not differ materially from that of the other hill tribes in Assam. They have a vague belief in a future life, and attribute their misfortunes to the machinations of demons, whom they propitiate with offerings.

The custom which has attracted most attention, and which

Other customs. differentiates the Nāgās from other Tibeto-Burman tribes, such as the Bodos, Mīkīrs, Daflās, and sub-Himālayan people, is their strange craving for human heads. Any head was valued, whether of man, woman, or child; and victims were usually murdered, not in fair fight, but by treachery. Sometimes expeditions on a large scale were undertaken, and several villages combined to make a raid. Even then they would usually retire if they saw reason to anticipate resistance. Most Angāmīs over fifty have more than one head to their credit, and the chief interpreter in the Kohīmā court is said to have taken eighteen in his unregenerate days. Head-hunting is still vigorously prosecuted by Nāgās living beyond the frontier, and human sacrifices are offered to ensure a good rice harvest. A curious custom is the *genna*, which may affect the village, the *khel*, or a single house. Persons under a *genna* remain at home and do no work; nothing can be taken into or brought out of their village, and strangers cannot be admitted. Among other quaint beliefs, the Nāgās think that certain men possess the power of turning themselves into tigers, while the legend of the Amazons is represented by a village in the north-east, peopled entirely by women, who are visited by traders from the surrounding tribes, and thus enabled to keep up their numbers.

Agriculture. The ordinary system of cultivation is that known as *jhūm*. The jungle growing on the hill-side is cut down, and the undergrowth is burned, the larger trees being left to rot where they lie. The ground is then lightly hoed over, and seeds of rice, maize, millet, Job's-tears (*Coix Lacryma*), chillies, and various kinds of vegetables dibbled in. The same plot of land is cropped for only two years in succession, and is then allowed to lie fallow for eight or nine years. Further cropping would be liable to destroy the roots of *ikra* and bamboo, whose ashes serve for manure when the land is next cleared for cultivation, while after the second harvest weeds spring up with such rapidity as to be a serious impediment to cultivation. Cotton is grown, more especially on the northern ridges inhabited by the Lhotās and Aos, who bring down considerable quantities for sale to the Mārwāris of Golāghāt. A more scientific form of cultivation is found among the Angāmī Nāgās, whose villages are surrounded by admirably constructed terraced rice-fields, built up with stone retaining-walls at different levels, and irrigated by means of skilfully constructed channels, which distribute the water over each step in the series. This system of cultivation is believed to have extended northwards from Manipur,

and to have been adopted by the Angāmīs, partly from their desire for better kinds of grain than Job's-tears and millet, as *jhūm* rice does not thrive well at elevations much exceeding 4,000 feet, and partly from a scarcity of *jhūm* land. It has the further advantage of enabling the villagers to grow their crops in the immediate neighbourhood of their homes, a consideration of much importance before the introduction of British rule compelled the tribes to live at peace with one another. Efforts are now being made to introduce this system of cultivation among the Aos and the Semās. The Nāgās do not use the plough, and the agricultural implements usually employed are light hoes, *daos*, rakes, and sickles. No statistics are available to show the cultivated area, or the area under different crops. Little attempt has been made to introduce new staples. Potatoes when first tried did not flourish, but a subsequent experiment has been more successful.

Cattle. Cattle are used only for food, and are in consequence sturdier and fatter animals than those found in the plains of Assam. The domesticated *mithan* (*Bos frontalis*) is also eaten; but the Nāgās, like other hill tribes in Assam, do not milk their cows.

Forests. The whole of the hills must have once been covered with dense evergreen forest; but the *jhūm* system of cultivation, which necessitates the periodical clearance of an area nearly five or six times as large as that under cultivation in any given year, is very unfavourable to tree growth. A 'reserved' forest, covering an area of 63 square miles, has recently been constituted in the north-east corner of the District. Elsewhere, the tribes are allowed to use or destroy the forest produce as they please. In the higher ridges oaks and pines are found, while lower down the most valuable trees are *gomari* (*Gmelina arborea*), *poma* (*Cedrela Toona*), *sām* (*Artocarpus Chaplasha*), and *uriam* (*Bischofia javanica*).

Minerals. The District has never been properly explored, but the hills overlooking the Sibsāgar plain contain three coal-fields—the Nāzirā, the Jhānzi, and the Disai. The Nāzirā field is estimated to contain about 35,000,000 tons of coal, but little has been done to work it. The coal measures contain iron ore in the shape of clay ironstone and impure limonite, and petroleum is found in the Nāzirā and Disai fields.

Manufactures. The manufacturing industries of the Nāgā Hills are confined to the production of the few rude articles required for domestic use. The most important is the weaving of coarse thick cloth of various patterns, the prevailing colours being dark blue—in some cases so dark as to be almost black—with

red and yellow stripes, white, and brown. Many of these cloths are tastefully ornamented with goat's hair dyed red and cowries. Iron spear-heads, *daos*, hoes, and rough pottery are also made. The Angāmī Nāgās display a good deal of taste in matters of dress, and a warrior in full uniform is an impressive sight; but the majority of the tribes wear little clothing, and only enough is woven to satisfy the wants of the household.

Commerce. Wholesale trade is entirely in the hands of the Mārwāri merchants known as Kayahs. The principal imports are salt, thread, kerosene oil, and iron; and Kohīmā is the largest business centre. The Nāgās trade in cotton, chillies, and boats, which they exchange for cattle and other commodities from the plains. The most important trading villages are Khonoma, Mozema, and Lozema, and the tribes who are keenest at a bargain are the Semās and Angāmīs. Members of the latter tribe sometimes go as far afield as Rangoon, Calcutta, and Bombay, but the Semās never venture beyond the boundaries of their own Province.

Means of communication. In 1903-4, 73 miles of cart-roads and 470 miles of bridle-paths were maintained in the District. The cart-road from Dimāpur to Manipur runs across the hills, connecting Kohīmā with the Assam-Bengal Railway. Generally speaking, the means of communication in the District are sufficient for the requirements of its inhabitants.

District subdivisions and staff. For administrative purposes the District is divided into two subdivisions, KOHĪMĀ and MOKOKCHŪNG. The Deputy-Commissioner is stationed at Kohīmā, and has one Assistant, who is usually a European. Mokokchūng is in charge of a European police officer, and an Engineer and a Civil Surgeon are posted to the District.

Civil and criminal justice. The High Court at Calcutta has no jurisdiction in the Nāgā Hills, except in criminal cases in which European British subjects are concerned; the Codes of Criminal and Civil Procedure are not in force, and the Deputy-Commissioner exercises powers of life and death, subject to confirmation by the Lieutenant-Governor. Many disputes, both of a civil and criminal nature, are decided in the village without reference to the courts. Theft is punished by the Nāgās with the utmost severity. If a man takes a little grain from his neighbour's field, he forfeits not only his own crop, but the land on which it has been grown, while theft from a granary entails expulsion from the village and the confiscation of the offender's property. Generally speaking, the policy of Govern-

ment is to interfere as little as possible with the customs of the people, and to discourage the growth of any taste for litigation. Considering the short time that has elapsed since the Nāgās were redeemed from barbarous savagery, the amount of serious crime that takes place within the boundaries of the District is comparatively small.

Revenue.

Land revenue is not assessed, except on a small estate held by the American Baptist Mission. A tax at the rate of Rs. 3 per house is realized from the Angāmī Nāgās; for other Nāgās the rate is Rs. 2 and for foreigners Rs. 5.

The table below shows the revenue from house tax and the total revenue, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Revenue from house tax .	12	45	59	58
Total revenue . . .	24*	78	83	1,05

* Exclusive of forest receipts.

Police and jails.

The civil police consist of 29 head constables and men under a sub-inspector, but their sphere of action does not extend beyond Kohīmā town and the Manipur cart-road. The force which is really responsible for the maintenance of order in the District is the military police battalion, which has a strength of 72 officers and 598 men. Prisoners are confined in a small jail at Kohīmā, which has accommodation for 32 persons.

Education.

Education has not made much progress in the hills since they first came under British rule. The number of pupils under instruction in 1890–1, 1900–1, and 1903–4 was 297, 319, and 647 respectively. At the Census of 1901 only 1·3 per cent. of the population (2·5 males and 0·1 females) were returned as literate. There were one secondary, 22 primary, and 2 special schools in the District in 1903–4, and 76 female scholars. More than two-thirds of the pupils at school were in primary classes. Of the male population of school-going age, 5 per cent. were in the primary stage of instruction. The total expenditure on education in 1903–4 was Rs. 6,000, of which Rs. 256 was derived from fees. About 32 per cent. of the direct expenditure was devoted to primary schools.

Hospitals and dispensaries.

The District possesses 3 hospitals, with accommodation for 24 in-patients. In 1904 the number of cases treated was 21,000, of whom 500 were in-patients, and 200 operations were performed. The expenditure was Rs. 5,000, the whole of which was met from Provincial revenues.

Vaccination. The advantages of vaccination are fully appreciated by the people; and, though in 1903-4 only 39 per 1,000 of the population were protected, this was largely below the average for the five preceding years.

[B. C. Allen, *District Gazetteer of the Nāgā Hills* (1905). A monograph on the Nāgā tribes is under preparation.]

Kohīmā Subdivision.—Subdivision of the Nāgā Hills District, Eastern Bengal and Assam, lying between 24° 42′ and 26° 34′ N. and 93° 7′ and 94° 26′ E., with an area of 2,337 square miles. The whole of the subdivision consists of hilly country inhabited by various tribes of Nāgās, of whom the most numerous and important are the Angāmīs and Lhotās. The average rainfall at Kohīmā is only 76 inches, but at Wokhā, farther north, it exceeds 100 inches. Population fell from 70,221 in 1891 to 68,619 in 1901, giving a density of 29 persons per square mile. The subdivision contains one town, Kohīmā (population, 3,093), the District head-quarters; and 224 villages. A peculiarity of the subdivision is the terraced cultivation of the Angāmī Nāgās. This powerful and warlike tribe cut out the slopes of the hill-side into terraces built up with stone retaining-walls, which are skilfully irrigated by channels distributing the water over the whole series. This system enables them to grow good rice at an elevation at which rice sown broadcast does not thrive. The principal source of revenue is house tax, which in 1903-4 was assessed at Rs. 34,000.

Mokokchūng.—Subdivision of the Nāgā Hills District, Eastern Bengal and Assam, lying between 26° 6′ and 26° 48′ N. and 94° 16′ and 94° 50′ E., with an area of 733 square miles. The population rose from 26,416 in 1891 to 33,783 in 1901, giving a density of 46 persons per square mile. A large portion of this increase was due to the immigration of tribes from beyond the frontier. The subdivision was formed in 1889, in order to protect the Ao Nāgās from the aggression of the tribes that live to the east of the Dikho river, and is in charge of a European officer of police. The annual rainfall at Mokokchūng village averages 96 inches. The principal source of revenue is house tax, which in 1903-4 amounted to Rs. 23,800.

Khonoma.—A large and powerful Angāmī Nāgā village in the Nāgā Hills District, Eastern Bengal and Assam, situated in 25° 39′ N. and 94° 1′ E. In 1879 Mr. Damant, the Political officer, was treacherously attacked here, and was killed, together with thirty-five of his escort. Khonoma was besieged and taken in November, 1879; but two European officers lost

their lives in the assault, and the defenders retreated to a very strong position above the village on a spur of Mount Jāpvo, where they maintained themselves till the end of the campaign. In January, 1880, a party of these Nāgās, though their village was at that very time occupied by our troops, made a daring raid on the Bālādhan garden in Cāchār, more than 80 miles distant, where they killed the manager, Mr. Blyth, and sixteen coolies.

Kohīmā Town.—Head-quarters of the Nāgā Hills District, Eastern Bengal and Assam, situated in 25° 41′ N. and 94° 7′ E., about 5,000 feet above the level of the sea. The cart-road from Dimāpur in the Brahmaputra Valley to Manipur passes through the town. Population (1901), 3,093. The rainfall averages 76 inches, and the climate is cool and pleasant. The head-quarters of the District were first located at this place in 1878, with the object of bringing the powerful tribe of Angāmī Nāgās, in whose territory it is situated, more completely under control. The station is situated on a spur of the hill near the large Nāgā village from which it takes its name, and contains a small jail with accommodation for 32 prisoners and a hospital with 10 beds. The garrison consists of two companies of Native infantry and a battalion of military police.

Sāmaguting.—Village on the lower slopes of the Nāgā Hills District, Eastern Bengal and Assam, situated in 25° 47′ N. and 93° 47′ E. It was occupied in 1866 by Lieutenant Gregory, in the hope that an outpost in the hills would put a stop to Nāgā raids, and remained the head-quarters of the Nāgā Hills District till 1878, when it was abandoned in favour of KOHĪMĀ, which is situated in the centre of the Angāmī country.

Khāsi and Jaintiā Hills.—District in Eastern Bengal and Assam, lying between 24° 58′ and 26° 7′ N. and 90° 45′ and 92° 51′ E., with an area of 6,027 square miles. The District, which forms the central section of the watershed between the valleys of the Brahmaputra and the Surmā, is bounded on the north by Kāmrūp and Nowgong; on the east by Nowgong and Cāchār; on the south by Sylhet; and on the west by the Gāro Hills. To the north the hills rise gradually from the Brahmaputra Valley in a succession of low ranges, covered with dense evergreen forest; but on the south the Khāsi Hills spring immediately from the plain to a height of 4,000 feet, and form a level wall along the north of the Surmā Valley. The Jaintiā Hills slope more gently to the plain, but these also have no low outlying ranges. The southern and central portions of the District consist of a wide plateau between 4,000 and 6,000 feet above

Boundaries, configuration, and hill and river systems.

sea-level, the highest point of which, the Shillong peak, rises to 6,450 feet. On the north, towards Kāmrūp, are two similar plateaux of lower elevation. The general appearance of these table-lands is that of undulating downs. They are covered with short grass, but destitute both of the dense forest and of the high jungle with one or other of which waste land in Assam is almost invariably covered. Here and there are to be seen clumps of oak and pine, the hills are broken up with deep gorges and smiling valleys, and the scenery is not unlike that found in many parts of England. A considerable number of rivers rise in the hills, but are of little importance as a means of communication within the boundaries of the District. The largest streams flowing towards the north are the KAPILI, Barpāni, UMIĀM or Kiling, and DIGRU, all of which fall either direct or through other channels into the Kalang in Nowgong; and the Khri, which is called the KULSI in Kāmrūp. To the south the best-known rivers are the Lubha, BOGĀPĀNI, and Kynchiang or JĀDUKĀTA. Where they flow through the plateau, the larger rivers have cut for themselves deep gorges of great beauty, whose precipitous sides are generally clothed with forest.

Geology. The Shillong plateau consists of a great mass of gneiss, which is bare on the northern border, but in the central region is covered by transition or sub-metamorphic rocks. To the south, in contact with the gneiss and sub-metamorphic, is a great volcanic outburst of trap, which is stratified and brought to the surface south of Cherrapunji. Still farther south are Cretaceous and Nummulitic strata, which contain deposits of coal and lime.

Botany. The characteristic trees of the central plateau are those of a temperate zone. At an elevation of 3,000 feet the indigenous pine (*Pinus Khasya*) predominates over all other vegetation, and forms almost pure pine forests. The highest peaks are clothed with fine clumps of oak, chestnut, magnolia, beech, and other trees, which superstition has preserved from the axe of the wood-cutter. Azaleas and rhododendrons grow wild, and many kinds of beautiful orchids are found in the woods.

Fauna. Wild animals include elephants, bison (*Bos gaurus*), tigers, bears, leopards, wild dogs, wild buffaloes in the lower ranges, and several kinds of deer.

Climate and temperature. The climate is cool and pleasant. In the hottest weather the thermometer at Shillong rarely rises above 80°, and in the winter ice often forms. Snow seldom falls, but this is partly due to the fact that there is little or no precipitation of moisture

in the cold season. Malaria lurks in the low ranges of hills on the north, but the climate of the high plateau is extremely healthy, and is admirably adapted to European constitutions.

There is no station in India where the recorded rainfall is as heavy as at CHERRAPUNJI, on the southern face of the Khāsi Hills. The average annual fall at this place is 458 inches; but the clouds are rapidly drained of their moisture, and at Shillong, which is less than 30 miles away, it is only 82 inches. At Jowai, which lies at about the same distance south-east of Shillong, the average annual fall is 237 inches. The rainfall has never been recorded in the northern hills, but it is probably between 80 and 90 inches in the year. Rainfall.

The District has always been subject to earthquakes, but all previous shocks were thrown into insignificance by the catastrophe of June 12, 1897. The whole of SHILLONG was levelled with the ground, masonry houses collapsed, and roads and bridges were destroyed all over the District. The total number of lives lost was 916. Most of these casualties occurred in the cliff villages near Cherrapunji, and were due to the falling of the hill-sides, which carried villages with them or buried them in their ruins. Earthquakes.

On ethnological grounds there are reasons for supposing that the Khāsis and Syntengs have been established in these hills for many centuries; but, living as they did in comparative isolation in their mountain strongholds, little is known of their early history. At the end of the eighteenth century they harried the plains on the north and south of the District, and their raids were thus described by Pemberton in 1835:— History.

'They descended into the plains both of Assam and Sylhet, and ravaged with fire and sword the villages which stretched along the base of this lofty region. Night was the time almost invariably chosen for these murderous assaults, when neither sex nor age was spared[1].'

The Khāsi Hills were first visited by Europeans in 1826, when Mr. David Scott entered into arrangements with the chiefs for the construction of a road through their territory from Assam into Sylhet. Work was begun; but in 1829 the Khāsis took alarm at the threats of a Bengali *chaprāsi*, who declared that the hills were to be brought under taxation. The tribes suddenly rose and massacred two European officers, Lieutenants Bedingfield and Burlton, near Nongkhlao, with about 60 of their native followers. Military operations were at once

[1] *Report on the Eastern Frontier of British India*, by Captain R. B. Pemberton, p. 221 (Calcutta, 1835).

commenced, but were protracted through several seasons, and it was not till 1833 that the last of the Khāsi chiefs tendered his submission. Engagements were then entered into with the heads of the various Khāsi States. Their independence was recognized, Government abstained from imposing any taxation upon their subjects, and their territories were held to be beyond the borders of British India. Since that date the history of the Khāsi States has been one of peaceful development, checked only by the great earthquake of 1897.

The Jaintiā Hills lapsed to the British Government in 1835, when the Rājā was deprived of the JAINTIĀ PARGANAS in the District of Sylhet, on account of his complicity in the murder of three British subjects. For the next twenty years the Syntengs, as the inhabitants of the Jaintiā Hills are called, were left almost entirely to their own devices. The administration was entrusted to their own headmen, who were undoubtedly corrupt; but the only tax levied was that dating from the Rājā's time, which consisted of one male goat from each village. In 1860 a house tax was imposed, as in the other hill tracts of the Province, and within a few months the people rose in open rebellion. Fortunately, a large force of troops was close at hand, and, before the revolt could make headway, it was stamped out. Scarcely, however, had the agitation subsided when the income tax was introduced into the hills. The total amount assessed was only Rs. 1,259, and the highest individual assessment Rs. 9; but this was enough to irritate a people who had never been accustomed to pay anything but the lightest of tribute to their own princes, and who had never been taught by conquest the extent of the British resources. In January, 1862, a revolt began; and, though apparently crushed in four months, it broke out again, and it was not till November, 1863, that the last of the leaders surrendered, and the pacification of Jaintiā could be said to be complete. Since that date a British officer has been posted in the Jaintiā Hills, and the people have given no trouble.

Cherrapunji was originally selected as the head-quarters of the hills, but the rainfall was found to be so excessive that the District officer moved to Shillong in 1864; and Shillong was constituted the head-quarters of the Administration when Assam was formed into a separate Province ten years later.

The people.

The population of the District, as returned at the last four enumerations, was: (1872) 140,356, (1881) 167,804, (1891) 197,904, and (1901) 202,250. The slow rate of increase which occurred during the last decade was due to the unfavourable

conditions prevailing after the earthquake of 1897. The first two enumerations were probably incomplete. The District contains two subdivisions, SHILLONG and JOWAI, with head-quarters at places of the same names. SHILLONG (population, 8,384) is the only town, and there are 1,839 villages.

The following table gives, for each subdivision, particulars of area, population, &c., according to the Census of 1901:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Shillong	3,941	1	1,199	134,329	34	+ 0·7	11,478
Jowai	2,086	...	640	67,921	33	+ 5·2	
District total	6,027	1	1,839	202,250	34	+ 2·2	11,478

About 88 per cent. of the population of 1901 were still faithful to their tribal religion, 3 per cent. were Hindus, and nearly all the remainder Christians. The female element in the population is very large; and there were 1,080 women to every 1,000 men enumerated in 1901, a fact which is probably connected with the independent position enjoyed by women. Of the total population, 59 per cent. speak Khāsī, a language which belongs to the Mon-Anam family, and 27 per cent. Synteng. The principal tribes are Khāsis (107,500), Syntengs, a cognate tribe in the Jaintiā Hills (47,900), and Mīkīrs (12,800). The proportion of the population supported by agriculture, 76 per cent., is comparatively low for Assam; but the Khāsis are keen traders, and ready to earn money in any honest way.

The Khāsi origin and organization.

The Khāsis and Syntengs, like the other tribes of Assam, are descendants of the great Indo-Chinese race, whose head-quarters are supposed to have been in North-Western China between the upper waters of the Ho-ang-ho and the Yang-tse-kiang. They are, however, thought to belong to one of the earliest bands of immigrants; and their language is quite unlike any other form of tribal speech now found in Assam, but is connected with the Mon-Khmer language used by various tribes in Anam and Cambodia. While the rest of the horde pressed onwards towards the sea, the Khāsis remained behind in their new highland home, and for many centuries have maintained their nationality intact, though surrounded on every side by people of a different stock. The tribe is sub-

divided into a large number of exogamous clans, which are in theory composed of persons descended from the same female ancestor. Each clan possesses distinctive religious rites, and a special place in which the uncalcined bones are buried after cremation. Politically, they are divided into a large number of petty States, most of which are ruled by a chief, or Siem, and some of which have less than 1,000 inhabitants. The Siemship usually remains in one family, but the succession was originally controlled by a small electoral body, constituted from the heads of certain priestly clans. Of recent years there has been a tendency to broaden the elective basis, and the constitution of a Khāsi State has always been of a very democratic character, a Siem exercising but little control over his people.

Personal appearance.

In personal appearance the Khāsis are short and sturdy, with great muscular development of the leg. The features are of a distinctly Mongolian type, with oblique eyes, a low nasal index, and high cheek-bones. They are of a cheerful, friendly disposition, but, though peaceful in their habits, are unused to discipline or restraint.

Villages and houses.

Among many of the north-east frontier tribes there is little security of life and property, and the people are compelled to live in large villages on sites selected for their defensive capabilities. The Khāsis seem, however, to have been less distracted by internal warfare, and the villages, as a rule, are small. The houses are low, with roofs nearly reaching to the ground, and are usually made of wooden planks. They are not built on platforms, as is commonly the case with the hill tribes; but the floor is often made of boards, and the roofs of the well-to-do are covered with corrugated iron or oil tins beaten flat. The interior is generally divided into two compartments.

Dress and food.

The men usually wear a sleeveless cotton shirt, a loin-cloth, and a wrap, and on their heads a turban, or a curious cloth cap with a peak over the forehead. The women are well clad in chemises and body-cloths, and both sexes often wear stockings with the feet cut off. The costumes brought out on gala days are most elaborate. The men wear silk loin-cloths and finely embroidered coats, while the women appear in really handsome silk cloths of different colours. The jewellery is massive, but handsome, consisting of silver coronets and pendants and heavy necklaces of coral and lac overlaid with gold. Their weapons are bows and arrows, with which they are always practising, swords, and shields. Their staple diet is dried fish

and rice; but they eat, when they can afford it, pork, beef, and any kind of game. Dog, however, they avoid, as, according to their legends, he was created to be the companion of man and his assistant in the chase. They drink large quantities of liquor, prepared from rice and millet, both fermented and distilled, and continually chew *pān*.

Marriage. At a marriage the parties are pronounced man and wife in the presence of their friends, and a feast usually follows. The essential part of the ceremony consists in the mixing of liquor from two different gourds, representing the two contracting parties, and the eating by the bride and groom out of the same plate. The bride at first remains in her mother's house, where she is visited by her husband; but when children are born, the parents, if they continue satisfied with one another, set up housekeeping together. This union between the sexes, however, can be terminated by mutual consent; and as the initial ceremony costs but little, a man is not deterred from changing his wife by the expense of obtaining a new partner. Divorce is very common, and is effected by a public declaration, coupled with the presentation by the man to the woman of five cowries or copper coins, which she returns to him with five similar coins of her own. He then throws them away. The public proclamation is occasionally dispensed with, and the marriage dissolved by the simple tearing of a *pān* leaf. The facility with which divorce can be obtained renders adultery or intercourse prior to marriage uncommon. Marriage, in fact, is merely a union of the sexes, dissoluble at will, and the people have no temptation to embark on secret intrigues. A woman who commits adultery is, moreover, regarded with extreme disfavour; and, according to the Khāsi code of morals, there is only one thing worse, and that is to marry in one's own clan. A widow is allowed to remarry, but not into the family of her late husband, a practice exactly the converse of that prevailing in the Gāro Hills, to the west.

Funeral ceremonies and inheritance. The Khāsis burn their dead, each clan or family having its own burning-ground. Two arrows are shot, one to the east and the other to the west, to protect the dead man, and a cock is sacrificed, which is supposed to show the spirit the way to the other world, and to wake him at dawn so that he may pursue his journey. The bones are subsequently collected from the pyre and removed to the common burial-place of the tribe. The stones erected to the memory of the dead form a special feature, being very numerous and often of great size; the largest are as much as 27 feet in height with an average

breadth of nearly 7 feet. These monuments are of two kinds, some being tall upright monoliths, others flat slabs resting on smaller stones about 18 inches high. The monoliths are generally placed in rows, the central stone being erected in memory of the maternal uncle and one on either side in honour of the deceased and the deceased's father. As with all monuments, these stones are erected near villages and paths, where they will be most often seen. The matriarchal theory is in full force, and inheritance goes through the female line. A Siem is usually succeeded by his uterine brothers, and failing them by his sister's sons. If he has no such nephews, the succession falls to his first cousins or grandnephews, but only to such as are cognates, his own sons and his kinsmen through the male line having no claim at all to the inheritance. So long as a man remains in his mother's house, whether married or unmarried, he is earning for his mother's family, and his mother or sisters and their children are his heirs. If, however, he is living separately with his wife, she and her daughters are entitled to succeed.

Religion. The natural religion of the Khāsis, like that of most of the hill tribes, is somewhat vague and ill defined. They believe in a future state, but do not trouble themselves much about it. Misfortunes are attributed to evil spirits, and steps are at once taken to ascertain who is offended, and how he may be best propitiated. One of their most curious superstitions is that of the *thlen*. The tradition runs that there was once in a cave near Cherrapunji a gigantic snake or *thlen*, which caused great havoc among men and animals. At last, one man took with him to the cave a herd of goats, and offered them one by one to the monster. The snake soon learnt to open its mouth to be fed at a given signal, and the man then made a lump of iron red hot, threw it into its mouth, and thus killed it. The body was then cut up and eaten, but one small piece remained, from which sprang a multitude of *thlens*. These *thlens* attach themselves to different families, and bring wealth and prosperity, but only if they are from time to time fed on human blood. To satisfy this craving a human being must be killed, and the hair, the tips of the fingers, and a little blood offered to the snake. Many families are known or suspected to be *ri thlen*, or keepers of the *thlen*, and murders are not unfrequently committed in consequence of this awful superstition.

The people have shown themselves extremely receptive of Christianity, but have little taste for Hinduism. One of their chief characteristics is a dislike of all restraint, including the

restraint of tradition, which is of such binding force among most of the inhabitants of the East. There are few people less conservative than the Khāsis, and they are ever ready to take up a novelty. To this healthy spirit of enterprise is due the marked progress they have made in the development of material comfort, and the extent to which they have outstripped the other tribes on the north-east frontier in their progress towards civilization.

The Syntengs. The Syntengs are very closely allied to the Khāsis in language, religion, and customs. They are, however, less sturdily built and have darker complexions, the result, in all probability, of closer connexion with the plains. They owned allegiance to the Jaintiā Rājā, whose local representatives were twelve *dollois* or headmen; but he received little in the way of tribute, and it is doubtful whether his influence in the hills was ever very strong.

Christian missions. The Welsh Presbyterian Mission, which has been established in these hills since 1841, has met with a large measure of success. The schools of the District are under the management of this society, which has succeeded not only in converting, but in imparting the elements of instruction to, a large proportion of the animistic population. In 1903 they had nine centres in the hills, at which twenty-one missionaries were employed. Of recent years a Roman Catholic mission has started work. The total number of native Christians in the District at the Census of 1901 was 17,125.

Agriculture. The soil of the Khāsi Hills consists of a stiff clay, often indurated with particles of iron, which in its natural state is far from fertile. Manure is accordingly much prized, and cow-dung is carefully collected and stored. Towards the east, the land becomes more fertile, and is often a rich black loam, and manure is not so necessary. In the more level valleys, in which the central plateau abounds, rice is grown on terraces and irrigated; and such fields are also found on the northern margin of the District, wherever the conformation of the surface admits of them. Water is run on these fields in winter, to keep the soil soft and free from cracks. Elsewhere, the crop is raised on the hill-side. Turf and scrub are dug up, arranged in beds and burnt, and seed is sown in the ashes which serve as manure. In addition to rice, the principal crops are maize, Job's-tears (*Coix Lacryma*), various kinds of millet and pulse, and a leguminous plant called *sohphlang* (*Flemingia vestita*), which produces large numbers of tubers about the size of pigeons' eggs among its roots. Cotton is grown in the forest clearings

to the north, and oranges, bay leaves, betel-nuts, and pine-apples on the southern slopes of the hills. This portion of the District was much affected by the earthquake of 1897, and many valuable groves were destroyed by deposits of sand.

Improvements in agricultural practice.

There are no statistics to show the area under cultivation; but the Khāsis are energetic and enterprising farmers, and readily adopt fresh staples that seem likely to yield a profit. Potatoes were first introduced in 1830, and were soon widely cultivated. In 1882 nearly 5,000 tons of this tuber were exported from the hills, but a few years later blight appeared, and there has since been a great decrease in the exports. An experimental farm has been started near Shillong, and new varieties of potato introduced, which have been readily adopted by the Khāsis. Peach and pear-trees are grown in the higher hills, and efforts have recently been made to acclimatize various kinds of English fruit. A serious obstacle is, however, to be found in the heavy rainfall of May and June, and only early-ripening varieties are likely to do well.

Live stock.

The cattle are fat and handsome little animals, much superior to those found in the plains. The cows yield little milk, but what they give is very rich in cream. The Khāsis do not milk their cows, and in many places do not use the plough, cattle being chiefly kept for the sake of the manure they yield, and for food. Ponies are bred, which in appearance and manners are not unlike the sturdy little animals of Bhutān. Pigs are kept in almost every house, and efforts have been recently made to improve the breed by the introduction of English and Australian animals.

Forests.

Two square miles of pine forest near Shillong have been formally reserved, and there is a 'reserved' forest 50 square miles in area at Saipung in the south-east corner of the Jaintiā Hills. This forest is said to contain a certain quantity of *nahor* (*Mesua ferrea*) and *sam* (*Artocarpus Chaplasha*), but up to date it has not been worked. Pine and oak are the predominating trees in the higher plateaux; but this portion of the District is very sparsely wooded, the trees having been killed out by forest fires and shifting cultivation. The ravines on the southern face of the hills and the low hills to the north are, however, clothed with dense evergreen forest. The area of these forests is not known, but there is very little trade in timber.

Mines and minerals.

The mineral wealth of the District consists of coal, iron, and limestone. Iron is derived from minute crystals of titaniferous iron ore, which are found in the decomposed granite on the surface of the central dike of that rock, near the highest

portion of the plateau. The iron industry was originally of considerable importance, but is now almost extinct. Cretaceous coal is found at Maobehlarkhar, near Maoflang, which is worked by the villagers in a primitive way for the supply of the station of Shillong. Another outcrop occurs at Lāngrin on the Jādukāta river. Nummulitic coal is found at Cherrapunji, Lākādong, Thanjināth, Lynkerdem, Maolong, and Mustoh. The Maolong field, which is estimated to contain 15,000,000 tons of good workable coal, has lately been taken on lease by a limited company. Limestone is found all along the southern face of the hills as far as the Hāri river, but it can be economically worked only where special facilities exist for its transport from the quarries to the kiln. Altogether thirty-four limestone tracts are separately treated as quarries. The most important are those situated on the Jādukāta and Panātīrtha rivers, the Dwārā quarries, the Shellā quarries on the Bogāpāni, the quarries which lie immediately under Cherrapunji, and the Utma quarries a little to the east on an affluent of the Piyain. The stone is quarried for the most part during the dry months, and rolled down to the river banks. When the hill streams rise, it is conveyed in small boats over the rapids, which occur before the rivers issue on the plains. Below the rapids it is generally reloaded on larger boats and carried down to the Surmā river, on the banks of which it is burnt into lime during the cold season. The earthquake of 1897 considerably increased the difficulties of transport, and the lime business has of recent years been suffering from a depressed market. The output in 1904 amounted in round figures to 123,000 tons. The quarries are worked by private individuals, usually themselves Khāsis, employing local labour. Stone quarries are also worked in the Jaintiā Hills. Government realized in royalties in 1903-4 about Rs. 12,000 from lime, and Rs. 1,600 from coal.

Arts and manufactures.

The manufactures of the District are not important. Handsome but rather heavy jewellery is made to order, and the Khāsis manufacture rough pottery and iron hoes and *daos*, or hill knives. Cloths and jackets are woven in the Jaintiā Hills from thread spun from the *eri* silkworm, and from cotton grown in the *jhūms*. Bamboo mats and cane baskets and sieves are also made.

Commerce.

The hillmen are keen traders, and a considerable proportion of the people earn their living by travelling from one market to another. The chief centres of business are at Cherrapunji, Laitlyngkot, Shillong, Jowai, and a market on the border of Sylhet near Jaintiāpur. The principal exports are potatoes,

cotton, lac, sesamum, oranges, bay-leaves, betel-nuts, and lime. The imports are rice and other food-grains, general oilman's stores, cotton piece-goods, kerosene oil, corrugated iron, and hand-woven cotton and silk cloths from the plains. There are a few Mārwāri merchants at Shillong, but they have no shops in the interior of the District, where trade is left in the hands of the Khāsis and Syntengs.

Means of communication.

An excellent metalled cart-road runs from Cherrapunji to Gauhāti, via Shillong, a distance of 97 miles. The gradients between Shillong and Gauhāti have been most carefully adjusted, and a tonga and bullock-train service is maintained between these two towns. Except in the immediate neighbourhood of Shillong, few roads are suitable for wheeled traffic; but in 1903-4 there were altogether 356 miles of bridle-paths in the District.

District subdivisions and staff.

The District is divided into two subdivisions, SHILLONG and JOWAI. Shillong is the head-quarters of the Deputy-Commissioner and the summer head-quarters of the Local Government. The Jowai subdivision is in charge of a European Subordinate Magistrate. In addition to these officers, an Assistant Magistrate is stationed at Shillong, and an Engineer who is also in charge of Kāmrūp District. The Jaintiā Hills, with Shillong and 34 villages in the Khāsi Hills, are British territory. The rest of the Khāsi Hills is included in twenty-five petty Native States, which have treaties or agreements with the British Government. These States vary in size from KHYRIM, with a population of 31,327, to NONGLEWAI, with a population of 169. Nine of these States had a population of less than 1,000 persons in 1901.

Civil and criminal justice.

The High Court at Calcutta has no jurisdiction in the hills, except over European British subjects. The Codes of Civil and Criminal Procedure are not in force, and the Deputy-Commissioner exercises powers of life and death, subject to confirmation by the Lieutenant-Governor. Petty criminal and civil cases, in which natives of the District are concerned, are decided by the village authorities. Serious offences and civil suits in which foreigners are concerned are tried by the Deputy-Commissioner and his Assistants. There is, on the whole, very little serious crime in the District, but savage murders are occasionally committed.

Land revenue.

Land revenue is assessed only on building sites and on flat rice land in the Jaintiā Hills, which pays Rs. 1-14 per acre. The principal source of revenue in British territory is a tax of Rs. 2 on each house.

The revenue from house-tax and total revenue is shown in the following table, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Revenue from house tax .	15	27	27	28
Total revenue . .	71*	1,15	1,35	1,44

* Exclusive of forest revenue.

There are police stations in the hills, at Shillong, Cherrapunji, and Jowai, and an outpost at Nongpoh, half-way between Shillong and Gauhāti. The force has a sanctioned strength of 23 officers and 183 men, who are under the immediate charge of the Deputy-Commissioner, but ordinary police duties are discharged by the village officials. The only jail in the District is at Shillong; it has accommodation for 78 prisoners. Police and jails.

Thanks to the efforts of the Welsh Presbyterian Mission, education has made considerable progress, and in 1901 the proportion of literate persons (5·7 per cent.) was higher than in any other District of Assam. The number of pupils under instruction in 1880–1, 1890–1, 1900–1, and 1903–4 was 2,670, 3,582, 6,555, and 7,275 respectively. The District owes its position to the spread of female education, 3·4 per cent. of the women being able to read and write, as compared with 0·4 per cent. in Assam as a whole. In 1903–4 there were 348 primary and 8 secondary schools and one special school in the District. The number of female scholars was 2,395. The great majority of the pupils under instruction were only in primary classes. Of the male population of school-going age 28 per cent. were in the primary stage of instruction, and of the female population of the same age 14 per cent. The total expenditure on education was Rs. 1,21,000, of which Rs. 7,000 was derived from fees. About 40 per cent. of the direct expenditure was devoted to primary schools. Education.

The District possesses two hospitals and four dispensaries, with accommodation for 23 in-patients. In 1904 the number of cases treated was 25,000, of whom 200 were in-patients, and 500 operations were performed. The expenditure was Rs. 10,000, the greater part of which was met from Provincial revenues. Hospitals and dispensaries.

Vaccination is compulsory only in Shillong town, and has been somewhat neglected in the District. In 1903–4 only 28 per 1,000 of the population were protected, as compared with 44 per 1,000 in Assam as a whole. Vaccination.

[A. Mackenzie, *History of the Relations of the Government with the Hill Tribes of the North-East Frontier of Bengal* (Calcutta, 1884); W. J. Allen, *Report on the Administration of the Cossyah and Jynteah Hill Territory* (Calcutta, 1858); J. D. Hooker, *Himalayan Journals* (1854); B. C. Allen, *District Gazetteer of the Khāsi and Jaintiā Hills* (1906); Major P. R. T. Gurdon, *The Khāsis* (1907).]

Shillong Subdivision.—Subdivision of the Khāsi and Jaintiā Hills District, Eastern Bengal and Assam, lying between 25° 7′ and 26° 7′ N. and 90° 45′ and 92° 16′ E., with an area of 3,941 square miles. It contains one town, SHILLONG (population, 8,384), the head-quarters of the Administration; and 1,199 villages. The subdivision is a section of the Assam Range, and consists of a high table-land, which rises sharply from the Surmā Valley to a height of about 4,000 feet, and north of the Shillong peak, which is over 6,000 feet, gradually falls away in a succession of low hills towards the Brahmaputra. Almost the whole of this country is outside the limits of British India, and consists of a number of petty Native States under the political superintendence of the Deputy-Commissioner. The inhabitants are Khāsis, a tribe possibly connected with the Mons of Anam and Cambodia. Coal is found in both the Nummulitic and Cretaceous strata, and there are enormous deposits of limestone on the southern face of the hills. The rainfall in this region is extraordinary, the average annual fall at CHERRAPUNJI being 458 inches. The clouds, however, quickly lose their moisture, and at Shillong, which is less than 30 miles away, the fall is but 82 inches. The population in 1901 was 134,329, compared with 133,383 in 1891, the density being only 34 persons per square mile.

Jowai Subdivision.—Subdivision of the Khāsi and Jaintiā Hills District, Eastern Bengal and Assam, lying between 24° 58′ and 26° 3′ N. and 91° 59′ and 92° 51′ E., with an area of 2,086 square miles. Jowai originally formed part of the territory of the Jaintiā Rājā, and was acquired from him by the British in 1835. The population in 1901 was 67,921, compared with 64,521 in 1891, giving a density of 33 persons per square mile. Most of the inhabitants are Syntengs, a tribe of Tibeto-Burman origin akin to the Khāsis. The subdivision contains 640 villages, and is in charge of a European Magistrate, whose head-quarters are at JOWAI, a prosperous village with some local trade. The rainfall is recorded only at Jowai, where there is an average fall of 237 inches; but on the southern face of the hills the precipitation is probably even greater.

Bhowal.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 865, and the gross revenue in 1903–4 was Rs. 900. The principal products are rice, millet, bay-leaves, black pepper, and lime.

Cherra.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 8,155, and the gross revenue in 1903–4 was Rs. 7,900. Coal and iron are found, but are not largely worked. Other products include potatoes and oranges, in which there is a considerable trade, cotton, millet, betel-nuts, *pān*, chillies, ginger, and honey. The title to the Siemship of the State is disputed, and on the occasion of the appointment of a new Siem in 1901 there were serious riots.

Dwārā Nongtyrmen.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 362, and the gross revenue in 1903–4 was Rs. 100. The principal products are rice, millet, and oranges. The most valuable mineral deposit is lime.

Jirang.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 723, and the gross revenue in 1903–4 was Rs. 2,245. The principal products are rice, millet, ginger, rubber, and cotton.

Khyrim (*Khairam* or Nongkhrem).—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 31,327, and the gross revenue in 1903–4 was Rs. 12,161. The principal products are potatoes, rice, millet, maize, lac, oranges, and cotton; and the chief manufactures, silk, cloth, and iron hoes and billhooks. Deposits of lime, coal, and iron exist in the State, but they are not worked.

Lāngiong.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 596, and the gross revenue in 1903–4 was Rs. 120. The principal products are potatoes and millet.

Lāngrin.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 1,138, and the gross revenue in 1903–4 was Rs. 2,050. The principal products are rice and millet. Deposits of coal and lime have been found in the State, but only the latter are worked.

Mahārām.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 8,464, and the gross revenue in 1903–4 was Rs. 1,570. The principal products are pepper, bay-leaves, honey, rice, potatoes, millet, and maize. Lime and iron are found, but are not worked. Imported iron is manufactured into hoes and billhooks.

Mālaisohmāt.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 491, and the gross revenue in 1903–4 was Rs. 200. The principal products are rice, millet, bay-leaves, betel-nuts, and oranges. There are deposits of lime in the State, but they are not worked.

Maodon.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 296, and the gross revenue in 1903–4 was Rs. 1,490. The principal products are millet, oranges, betel-nuts, pineapples, and bay-leaves. Deposits of lime and coal exist in the State, but are not worked.

Maoflang.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 947, and the gross revenue in 1903–4 was Rs. 145. The principal products are millet, rice, coal, and potatoes.

Maoiang.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 1,856, and the gross revenue in 1903–4 was Rs. 300. The principal products are potatoes, millet, and honey. Lime and iron are found in the State, but are not worked.

Maolong.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 1,472, and the gross revenue in 1903–4 was Rs. 1,800. The principal products are oranges, millet, betel-nuts, and pineapples. There is some trade in lime, and the coal-mines of the State have been leased to a company for thirty years.

Maosanrām.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 1,414, and the gross revenue in 1903–4 was Rs. 2,930. The principal products are potatoes, millet, and honey. Lime, coal, and iron are found in the State, but are not worked.

Marriw.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 2,289, and the gross revenue in 1903–4 was Rs. 380. The principal products are rice, millet, and maize. Lime is found in the State, but is not worked.

Mylliem (*Mulliem*).—Petty State in the Khāsi Hills, Eastern Bengal and Assam, in the immediate vicinity of Shillong. The population in 1901 was 17,863, and the gross revenue in 1903–4 was Rs. 9,619. The principal products are rice, potatoes, maize, and millet. The manufactures are iron hoes and baskets. There are deposits of iron in the State, but they are not worked.

Nobosophoh.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 1,555, and the gross revenue in 1903-4 was Rs. 500. The principal products are rice, maize, and potatoes. Lime is found in the State, but is not worked.

Nongkhlao.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 9,715, and the gross revenue in 1903-4 was Rs. 2,350. It was near Nongkhlao that Lieutenants Bedingfield and Burlton were massacred in 1829 with 50 or 60 natives, an event that led to a struggle with the Khāsis, which was not terminated till 1833. The principal products of the State are potatoes, rice, millet, and maize. The only manufactures are iron axes and hoes.

Nonglewai.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 169, and the gross revenue in 1903-4 was Rs. 40. The principal products are millet, rice, and potatoes.

Nongspung.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 1,859, and the gross revenue in 1903-4 was Rs. 880. The principal products are rice, potatoes, and honey. Iron is found in the State, but is not worked.

Nongstoin.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 9,606, and the gross revenue in 1903-4 was Rs. 7,610. The principal products are lac, honey, cotton, bay-leaves, rice, and millet. The manufactures include rough pottery, cotton cloth, billhooks, and hoes. Lime and coal are found in the State, but only the former is worked.

Pamsanngut.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 288, and the gross revenue in 1903-4 was Rs. 50. The principal products are potatoes and millet.

Rambrai.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 2,697, and the gross revenue in 1903-4 was Rs. 600. The principal products are rice, millet, cotton, and maize.

Shellā.—Petty State in the Khāsi Hills, Eastern Bengal and Assam, consisting of a confederacy of villages ruled by four officers elected by the people. Many lives were lost in the earthquake of 1897; and the population, which was 6,358 in 1891, had fallen to 4,358 in 1901. The gross revenue in 1903-4 was Rs. 4,172. The principal products are pine-

apples, areca-nuts, and oranges, which prior to the earthquake were a source of great wealth to the people, but much damage was done to the orange groves by deposits of sand. There is also some trade in lime.

Sohiong.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 2,014, and the gross revenue in 1903–4 was Rs. 600. The principal products are millet, rice, and potatoes.

Cherrapunji.—Village in the Khāsi Hills, Eastern Bengal and Assam, situated in 25° 15′ N. and 91° 44′ E., on a plateau overlooking the plains of Sylhet, 4,455 feet above sea-level. Cherrapunji is famous as having the highest recorded rainfall of any place in Asia. The annual fall averages 458 inches, but in 1861 a total of 905 inches fell, including 366 in the month of July. In 1876 nearly 41 inches fell in 24 hours. The Khāsi Hills at this point rise straight from the plains, and the south-west monsoon blowing across the flooded tracts of Eastern Bengal and Sylhet is suddenly stopped by this barrier. The air, which is saturated with moisture, cools and is precipitated in the form of rain. The village is situated on a plateau overlooking the plains, bounded by gorges on either side, and is thus completely surrounded by cooling vapour. The administrative head-quarters of the Khāsi and Jaintiā Hills were originally fixed at this place, but they were transferred to Shillong in 1864. The remains of the bungalows, which were built of solid masonry, formed an interesting spectacle, but were much damaged by the earthquake of 1897. Cherrapunji contains a dispensary, an English middle school, and a branch of the Welsh Presbyterian Mission. Coal is found near the top of an isolated ridge, steeply scarped on every side and rising to about 300 feet above the level of the plateau. The seam lies in a horizontal position on a bed of limestone, and its outcrop, where not concealed by jungle or débris, forms a continuous ribbon, following the contours of the hill. The coal is of excellent quality, and is fit for use on steamers, but at present it is only worked in a desultory and unscientific manner by the Khāsi villagers. The total quantity in the field is estimated at more than a million tons.

Jowai Village.—Head-quarters of the Jowai subdivision of the Khāsi and Jaintiā Hills District, Eastern Bengal and Assam, situated in 25° 26′ N. and 92° 12′ E., at a height of 4,422 feet above the sea. Population (1901), 3,511. Jowai is the head-quarters of the subdivisional officer, who is almost

invariably a European, and it possesses a considerable trade. The chief exports are raw cotton and rubber; the imports are rice, dried fish, cotton goods, and salt. The annual rainfall averages 237 inches.

Shillong Town.—Head-quarters of the Khāsi and Jaintiā Hills District, and summer capital of the Government of Eastern Bengal and Assam, situated in 25° 34′ N. and 91° 53′ E. It is connected with Gauhāti by a metalled road, 63 miles in length, on which there is a daily tonga service, and which is continued to Cherrapunji, a village overlooking the plains of Sylhet. The population at the last three enumerations was: (1881) 3,737, (1891) 6,720, and (1901) 8,384.

Shillong first became the civil station of the Khāsi and Jaintiā Hills in 1864, in the place of Cherrapunji. In 1874, on the formation of Assam into a separate Province, it was chosen as the head-quarters of the new Administration, on account of its salubrity and its convenient position between the Brahmaputra and Surmā Valleys. The climate is singularly mild and equable, and the thermometer seldom rises in the hottest weather above 80°. In the winter shallow water freezes at night, but snow seldom falls. The annual rainfall averages 82 inches. The town has been laid out with great taste and judgement among the pine woods at the foot of the Shillong range, which rises to a height of 6,450 feet above the sea. It is surrounded with rolling downs; and visitors enjoy facilities for riding and driving, polo, golf, and cricket, which cannot usually be obtained in the hill stations of the Himālayas.

Prior to 1897 most of the public offices and private houses were built of rough-hewn masonry. The earthquake of June 12 in that year reduced them to a heap of ruins in the space of a few seconds, wrecked the water-supply, and destroyed the embankment which dammed up the waters of the lake near Government House. The shock occurred at 5 o'clock on Saturday afternoon, when nearly every one was out of doors, and only 2 Europeans and 27 natives were killed. Had it taken place at night, there would have been few survivors. The station has since been rebuilt, but the use of brick and stone has been sedulously avoided. The water-supply is derived from the neighbouring hill streams, and is distributed in pipes all over the town. Shillong is the head-quarters of the Officer Commanding the Assam Brigade, of the heads of all the departments of Government, and of the Welsh Presbyterian Mission, which has done much to promote the spread of

education in the hills. The garrison consists of a regiment of Native infantry and a volunteer corps, which in 1904 had a strength of 34. There are a large Government press and two small private presses. Three monthly papers appear in the Khāsi vernacular.

The jail contains accommodation for 78 prisoners, and the charitable dispensary has 17 beds. Shillong is administered as a Station under (Bengal) Act V of 1876. The municipal receipts and expenditure during the ten years ending 1902-3 averaged Rs. 29,000. In 1903-4 the income was Rs. 25,500, chiefly from taxes on houses and lands and water-rate (Rs. 17,100), while the expenditure of Rs. 22,800 included conservancy (Rs. 10,100) and public works and water-supply (Rs. 7,100). The receipts and expenditure from cantonment funds in 1903-4 were Rs. 8,300 and Rs. 7,000 respectively. The bazar contains a few shops, at which both Europeans and natives can satisfy most of their requirements, while the Khāsi market is one of the principal centres of trade in the hills. The principal educational institution is a high school, which in 1903-4 had an average attendance of 135 boys.

Boundaries, configuration, and hill and river systems.

Gāro Hills.—District in the south-western corner of Assam, lying between 25° 9′ and 26° 1′ N. and 89° 49′ and 91° 2′ E., with an area of 3,140 square miles. It is bounded on the north by Goālpāra District; on the east by the Khāsi and Jaintiā Hills; and on the west and south by the Eastern Bengal Districts of Rangpur and Mymensingh. As its name implies, the greater portion of the District consists of hills, which form the western extremity of the range dividing the valleys of the Brahmaputra and the Surmā. These hills rise sharply from the plain on the south, and attain their highest elevation in the Turā and Arbela ranges, which lie parallel to one another, east and west, near the centre of the District. The highest peak, Nokrek (4,652 feet), is a little to the east of Turā station. On the north a succession of low hills fall away towards the Brahmaputra. The ranges include many steep ridges separated from one another by deep valleys, and, except where they have been cleared for cultivation, are covered with dense forest. At the foot of the hills is a fringe of level land, into which outlying spurs project, but which otherwise does not differ from the adjoining plains. The principal river is the SOMESWARI, which rises to the north of Turā station and falls into the Kāngsa river in Mymensingh. Other important streams flowing towards the south are the Bhugai, Nitai, and Maheshkhāli, all of which are used for floating timber, while

from the northern side of the watershed the Krishnai, Dudhnai, Jinjiram, and other minor streams fall into the Brahmaputra. There are no lakes or *bīls* in the hills, but near Phulbāri lies a large marsh, which is leased as a fishery. The general appearance of the District is wild and picturesque. Some of the rivers flow through rocky gorges, which are overgrown with trees, creepers, and giant ferns to the water's edge, and nowhere is the scenery tame or uninteresting. On a clear day a magnificent view over hill and plain is obtained from the summit of Turā hill, and the course of the Brahmaputra can be traced for many miles.

The greater portion of the District is formed of gneissic rock, overlaid by sandstones and conglomerates belonging to the Cretaceous system. On the top of these rest limestones and sandstones of Nummulitic age, while sandstones of Upper Tertiary origin form low hills along the Mymensingh border. Geology.

In their natural condition the hills are covered with dense forest, most of which is evergreen, though *sāl* and other deciduous trees are also found. Dense bamboo jungle springs up on land which has been cleared for cultivation and then left to fallow, and the bottoms of the valleys are often covered with high reeds and grass. Botany.

The hills abound in game, including elephants, tigers, leopards, bears, bison, deer, and a species of goat antelope or serow (*Nemorhaedus bubalinus*); and in the low country buffalo and occasionally rhinoceros are found. In 1904, 17 persons were killed by wild animals, and rewards were paid for the destruction of 50 tigers and leopards and 54 bears. Since 1878 elephants have been hunted almost every year by the Government Khedda department, about 190 animals being captured annually; but operations have recently been suspended, to allow the herds a little rest. Small game include peafowl, jungle-fowl, partridges, snipe, pheasants, and hares; while excellent mahseer fishing is to be obtained in the rivers. Fauna.

The whole of the District is malarious and unhealthy, and *kalā azār* here made its first appearance in Assam. This disease is an acute form of malarial poisoning, which has been a cause of dreadful mortality in the Brahmaputra Valley. The elevation is not, as a rule, sufficient to produce any material reduction in the temperature; but the heavy rainfall, and the evaporation which goes on over the immense expanse of forest, tend to cool the air during the rainy season. The rainfall is recorded only at Turā, where about 125 inches usually fall Climate and rainfall.

in the year. As in the rest of Assam, there is heavy rain in March, April, and May, a time when in Northern India precipitation is at its minimum.

Earthquakes and storms.

The earthquake of 1897 was felt very severely in the Gāro Hills, but, as there are no masonry buildings in the District, the actual damage done was less than in other places. Violent storms frequently pass over the country at the foot of the hills in March and April. In 1900 two cyclones swept over this portion of the District, uprooting trees and destroying everything in their path. Fourteen persons were killed and nine injured, but more damage was done in the neighbouring District of Goālpāra.

History.

Practically nothing is known of the early history of the District. Ethnologically the Gāros are a section of the great Bodo race, which at one time occupied a large part of the valley of the Brahmaputra, and were probably driven from the plains into the hills by early Hindu invaders from Bengal. The earliest notices of the Gāros describe them as being in a state of intermittent conflict with the *zamīndārs* of the large estates lying at the foot of the hills. These *zamīndārs* were, in all probability, themselves sprung from the great Bodo stock to which the Gāros belong, but in power and civilization had advanced far beyond their highland kinsmen. The exactions levied by the subordinates of these border chiefs irritated the hillmen, and the belief that the spirits of their headmen required the souls of others to attend them in the next world acted as a further incitement to the dispatch of raiding parties. At the end of the eighteenth century, the Gāros inhabiting the outer ranges had been brought to some extent under the authority of the *zamīndārs*, but the villages in the interior were entirely independent. As early as 1790 the British Government had tried to put an end to these disturbances by appointing one of the most powerful Gāro chiefs a *zamīndār* under the Company, but their efforts were frustrated by the turbulence of the Goālpāra *zamīndārs*. In 1816 Mr. Scott was deputed to the frontier, and steps were taken to release the tributary Gāros from the control of the Bengali landlords. It was difficult, however, to put down all oppression, and the hillmen continued to be turbulent. In 1848 an expedition was sent into the hills to punish the Dasanni Gāros for having murdered one of their headmen, with all his family, because he attempted to collect the tribute due from them to Government. In 1852 seven Gāro raids took place, in which 44 persons were killed, and a blockade

was established along the frontier, which produced some effect; but in 1856 the tribes broke out again and successive raids were made upon the plains. Between May, 1857, and October, 1859, nine incursions were made into Goālpāra and 20 heads were taken. An expedition was dispatched into the hills in 1861, the effects of which lasted for a few years; but in 1866 a most murderous raid was made into Mymensingh District, and it was decided to post an officer, Lieutenant Williamson, in the hills. The success with which this experiment was attended was very striking. Raids ceased, and many independent villages submitted of their own accord. The hills were constituted a separate District in 1869. In 1870 the survey, which had been carried through the neighbouring hills, entered the District, and it was determined to take this opportunity of exploring independent Gāro territory. No opposition was offered at first, but in the following year a survey cooly was seized and murdered by the villagers of Rongmagiri. An expedition was accordingly dispatched at the beginning of the cold season; and in the summer of 1872 some villages, which had attacked Gāros who had assisted the expedition, were punished by the Deputy-Commissioner. It was then decided that the whole of the country should be brought under control; and in 1872–3 three detachments of police marched through the independent territory from the south, north, and west. Little resistance was experienced, and since that date the history of the District has been one of profound peace.

The people.

The population of the Gāro Hills rose from 121,570 in 1891, the first year in which a regular census was taken, to 138,274 in 1901, or by 13·7 per cent. The people live in 1,026 villages, and the density of population is 44 persons per square mile. About 82 per cent. of the population in 1901 were still faithful to their animistic beliefs, 10 per cent. were Hindus, and 6 per cent. Muhammadans. The head-quarters of the American Baptist Mission are at Turā, and almost all the native Christians (3,629) are members of this sect. Gāro is the language of 77 per cent. of the population, and 5 per cent. speak Rabhā, another dialect of the Bodo group.

Castes and occupations.

As the name of the hills implies, the great majority of the population are Gāros, who numbered 103,500, or 75 per cent. of the whole. To these should be added nearly all the native Christians. Of the same stock are the Rabhās (7,700), the Koch (4,300), and the Haijongs (5,300), though the two last profess to be Hindus by religion. The language spoken by

the Haijongs is akin to Bengali, but from their appearance it is evident that they have a large admixture of Gāro blood. The economic organization of the hillmen is naturally of the most simple character, and 96 per cent. of the population returned agriculture as their means of livelihood in 1901.

Origin of Gāros.

Linguistically, the Gāros belong to the Bodo group, and there seem good grounds for supposing that they are members of the great Tibeto-Burman race, whose cradle is said to have been North-Western China between the upper waters of the Yang-tse-kiang and the Ho-ang-ho. The Tibeto-Burmans sent forth successive waves of emigrants, who spread down the valley of the Brahmaputra and the great rivers, such as the Chindwin, the Irrawaddy, and the Mekong, that flow towards the south. The Gāros are believed to be closely related to the Kachāris, Rabhās, Mech, and other tribes inhabiting the Assam Valley, but to belong to a wave of immigrants subsequent to, and distinct from, that which left the Khāsis in the hills to the east. According to their own traditions, they came originally from Tibet and settled in Cooch Behār. From there they were driven to the neighbourhood of Jogighopā, where they remained 400 years, but were again compelled to fly towards the south by the king of the country and his ally, the ruler of Cooch Behār. Their next wanderings were towards Gauhāti, where they were enslaved by the Assamese, but released by a Khāsi prince, who settled them in the neighbourhood of Boko. The place was, however, infested with tigers, and the Gāros then moved into the hills in which they are now found.

Organization.

The name they use among themselves is not Gāro, but Achikrang, 'hill people,' or Manderang, 'men.' The Gāros classify themselves by geographical divisions (*jal*) and by exogamous septs (*chachi*), subdivided into *maharis* or families. There are altogether about fifteen *jals*, the most important of which are the Abeng, who live to the west of Turā, the Atong in the lower, the Matchi in the central, and the Matjangchi in the upper Someswari valley, the Awi and Akawi in the low country round Dāmrā, the Chisak to the north of the Awi, the Matabeng in the hills north of Turā, and the Migam on the borders of the Khāsi Hills. The great majority of these divisions do not appear to denote racial distinctions. The Migam seem to have intermarried with the Khāsis, and the Atong have some connexion with the Koch. There are differences of dialect, but customs, as a rule, are similar. The Abeng are the most numerous section, but the Atong

have made more progress, and the Awi dialect is used in the publications of the Turā mission, as they were the first Gāros to come under missionary influence. There are two main exogamous septs, the Sangma and the Marak. A third sept called Momin is found among the Awi. The septs are again divided into numerous families called *maharis*. There is no restriction on intermarriage between members of different *jals*, provided that they do not belong to the same sept. The village organization at the present day is of a very democratic character; but if their legends are to be believed, the Gāros were originally ruled by chiefs. In appearance they are squat and sturdy, with oblique eyes, large heads, thick lips, and large and ugly features, which have a peculiarly flattened appearance. In disposition they are cheerful and friendly.

Villages and houses. The villages are often built on the side of the hills, and are unfortified, unlike those of the Nāgās and Lushais, who prior to the British occupation of their country lived in a perpetual state of warfare. They consist, in fact, of small hamlets, containing but a few houses, and in no other District in the Province are the villages so small. The houses are chiefly constructed of bamboo, and though one end rests on the earth, the other, which overhangs the slope of the hill, is supported on bamboo posts, and is some height above the ground. They are often from 80 to 100 feet in length, and are divided into different compartments; but, owing to the absence of windows, they are dark and gloomy, and the fire smouldering on the hearth serves only to accentuate the darkness.

Dress and food. The Gāro costume is as scanty as is compatible with decency. The men wear a very narrow cloth, which is passed between the legs and fastened round the waist. The woman's cloth, which is also of the scantiest description, is fastened round the body below the navel, the two top corners meeting over the thigh; the bottom corners are left unfastened, as otherwise the petticoat would be too tight for comfort. The women load their ears with masses of brass earrings, and individuals have been seen with more than 60 brass rings, 6½ inches in circumference and weighing altogether just under 2 lb., in the lobe of a single ear. The lobe, though enormously distended, was not broken; but the weight of the rings was to a great extent supported by a string passed over the head. The Gāro weapons consist of spear, sword, and shield. The sword, which is peculiar to these hills, is a two-edged instrument, the blade and handle forming one piece. The shield is composed of thin strips of bamboo woven together so as to be almost

proof against a spear-thrust. The staple article of food is rice, but Gāros will eat practically anything.

Marriage. The Gāros are not exclusive in matters matrimonial, and will intermarry with any persons except Jugis or sweepers. Owing to the conditions under which they live, mixed marriages are, however, far from common. The proposal comes from the family of the bride, and, though his parents' consent must of course be obtained, the wishes of the person most concerned are sometimes not consulted. If he dislikes the girl, the bridegroom runs away, and after he has done this and been recaptured twice or thrice, he is allowed to go for good and all. The essential portions of the ceremony are an address from the priest and the slaughter of a cock and hen. Divorce is recognized, and widows are allowed to marry, but are expected to marry in their husband's family. Polygamy is permitted, provided that the consent of the first wife be obtained. Contrary to the usual customs of the animistic tribes, girls who are heiresses are sometimes married before the age of puberty. Inheritance goes through the female, and property frequently passes through the daughter to the son-in-law. Where this is the case, the latter is compelled to marry his mother-in-law, if she is still alive, and a man not unfrequently occupies the position of husband towards mother and daughter at the same time. When a woman dies, the family property passes to her youngest, or occasionally to her eldest, daughter. The husband is, however, allowed to retain possession of the estate if he can succeed in obtaining one of his first wife's family as his second spouse. In spite of the liberal exposure of their persons, the women are chaste and make good and steady wives; and, as far as the orthodox standards of sexual morality are concerned, they compare favourably with the Khāsi women, their neighbours on the east, who swathe themselves in a multitude of garments.

Funeral rites. The dead are burned and the calcined bones buried in the neighbourhood of the homestead. The villagers are feasted, and in each house can be seen a bullock which is kept fatted up in preparation for the next funeral, and serves as a perpetual *memento mori*. A post is erected near the porch in memory of the deceased, and houses which have been in the same position for many years have sometimes as many as fifty posts, standing like a gigantic sheaf of corn before them. A great man's post is carved into a rude effigy of his features, clothed in his dress of state, and further ornamented with his umbrella and his head covering, if he had one.

The Gāros appear to, believe in a supreme deity and in a future life; but, as is usual in the hills, the greater part of their religious activities is devoted to the propitiation of evil spirits, who are supposed to be the cause of the misfortunes that befall them. The following is an accurate description of a Gāro sacrifice :— Religion.

'The priest squatted before a curious flat shield of split bamboo and cane, and muttered strangely to himself, as though under the influence of some drug. A villager kept dragging a kid in a circle round and round the priest and his curious god, and each time as it passed the priest dabbed it on the head with a little flour and water. Finally a little of the mixture was forced into its mouth and it was summarily beheaded. The blood was allowed to pour upon a plate of rice, which, with the tail, was offered to the deity. The rest of the animal went to form part of the feast.'

The people, as a whole, are well-to-do, and have accumulated property. Some of their most treasured possessions are metal gongs, to which they attach a fictitious value. The intrinsic worth of these articles is small, and new gongs do not cost more than a few rupees, but one collection of 60 old ones is known to have been sold for Rs. 3,000, a large price to obtain from a semi-savage community. Customs.

In the hills the Gāros cultivate their land on the system known as *jhūm*. A spot of land is selected on the hill-side, and the jungle cut down during the cold season. Towards the end of March, the trees and brushwood are burned as they lie, and the rice crop is planted in April at the commencement of the rains. Shortly afterwards, the seeds of vegetables, cotton, pepper, and pulses are sown in the same clearing; and each crop is reaped in rotation as it comes to maturity. Miscellaneous crops include potatoes, *arhar* (*Cajanus indicus*), reared as food for the lac insect, ginger, indigo, and turmeric. In the second year rice only is grown; and after two years' cultivation the clearing is abandoned and suffered to lie fallow for about ten years. Neither plough nor spade is used, except in the few Hinduized villages bordering on the plains. The sole implements of agriculture are a short *dao* fixed in a long handle, with which jungle is cleared, and a small hoe. The cotton is short in staple and poor in quality, but contains a small proportion of seed and has been found suited for mixing with woollen fabrics. Agriculture.

There are no means of ascertaining the area under cultivation in the hills; but in the submontane villages, which

contain a little over one-fourth of the total population, the land is measured every year by the local revenue officials. The area under the principal crops in this tract in 1903–4 was: rice 23,000 acres, mustard 3,700, and jute 1,800 acres; but in the District as a whole cotton is the most important staple after rice. The area under cultivation has expanded with the growing population, but no figures can be quoted to show the extent to which this has taken place. Irrigation is unknown; it would be impossible in the hills except with a system of artificially constructed terraces, and in the plains it is not required. Loans are occasionally made by Government to the cultivators, as there are very few money-lenders in the District, but only small sums are thus distributed.

Cattle. In the hills cattle are used only for food, and are, as a rule, fat and sturdy animals, as the Gāros, like other hill tribes, leave all the milk to the calf.

Forests. There are eighteen patches of 'reserved' forests dotted about the District, which cover altogether an area of 139 square miles. A considerable portion of these Reserves is stocked with *sāl* (*Shorea robusta*), but the difficulty experienced in getting the timber to market has hitherto prevented them from being worked with any success. Other valuable trees are *sam* (*Artocarpus Chaplasha*), *gomari* (*Gmelina arborea*), *paroli* (*Stereospermum chelonoides*), and *koroi* (*Albizzia procera*). On three occasions leases of the Dāmbu Reserve have been given to private persons on favourable terms; but in every case the concession was abandoned, as the holder found that he was unable to work it at a profit. The whole of the hills are covered with mixed evergreen and *sāl* forest and bamboo jungle, in which the Gāros are allowed to cultivate, and from which they may take anything which they require for their own use. Royalty must, however, be paid on all timber removed for sale. These forests are managed by the Forest department, and more timber is sold from them than from the Reserves.

Minerals Outcrops of coal, all of Cretaceous origin, have been found in the Gāro Hills, from Samding in the north-west corner of the District to Siju, which is situated at the point where the Someswari river pierces the main range. The most important field is situated a little farther up the valley of that river in the neighbourhood of the Darangiri; but, though the quantity of coal is very large, the field has not been worked, owing to the lack of means of transport. A syndicate has recently obtained a prospecting licence. Petroleum oil has

been found at Dholakhāl in the Someswari valley. There are deposits of limestone in the valley of the Maheshkhāli, and of fine potter's clay near the base of the Cretaceous rocks of the western range. None of these minerals is at present worked.

Arts and manufactures.

There are no special local manufactures in the hills. The Gāro women weave a coarse cotton cloth for the scanty garments of themselves and the men, and baskets and bamboo mats are also made for sale. The cloth is generally coloured with a blue dye and ornamented with red stripes. Rude pottery is made in certain villages, but all metal utensils are imported.

Commerce.

Trade is chiefly carried on at the small markets situated at the passes leading into the plains. The most important are: on the southern border, Khata, Mahendraganj, Dālu, Ghoshgaon, and Bāghmāra; on the north, Nibāri; and on the north-west border, Phulbāri and Singrimāri. In the hills, the two chief markets are at Turā and Gārobādha. The principal articles of export are cotton, timber and other forest produce, boats, chillies, and lac from the hills, and mustard and jute from the plains; the imports received in exchange consist of rice, dried fish, cattle, goats, fowls, pigs, cloth, and ornaments. The raw cotton is bought up by Mārwāri merchants to be shipped to Sirājganj, but Turā is the only place in which they have established shops.

Means of communication.

Two cart-roads leave Turā, one to Rowmarighāt on the Brahmaputra, the other to Dālu on the Mymensingh border. A cart-road has also been constructed by the lessee of the Dāmbu forest to Dāmrā, a distance of 24 miles; bridle-paths run to Sālmāra and Dāmrā. Altogether, 73 miles of cart-roads and 126 miles of bridle-paths were maintained by the Public Works department in 1903-4. The remaining means of communication are the tracks made by the Gāros from one village to another.

District staff.

The District does not contain any subdivisions, and only a small staff is employed on its administration. Public works are in charge of the Executive Engineer stationed at Dhubri, and the Forest officer is usually a native subordinate. The officer in charge of the civil and military police is generally invested with magisterial powers.

Civil and criminal justice.

The Gāro Hills are administered under a code of Regulations specially framed by the Local Government on their behalf. The High Court at Calcutta has no jurisdiction; and the Deputy-Commissioner is empowered to try civil suits of any value, and to pass sentence of death subject to confirma-

tion by the Lieutenant-Governor. Petty criminal and civil cases are decided by village officers called *laskars*, who are also entrusted with the greater part of the duties assigned to the police in other Districts. The Codes of Civil and Criminal Procedure are not in force, but the courts, though not bound by the letter, are guided by the spirit of these laws. In the Gāro polity almost every form of wrong can be atoned for by the payment of pecuniary compensation; but the hillmen have no sense of a statute of limitations, and complaints are sometimes preferred with regard to offences and civil causes of action which occurred many years before. The people have now become peaceful and law-abiding, and there is little litigation either criminal or civil.

Revenue. Land revenue is not assessed in the hills, but the Gāros pay a tax of Rs. 2 per house, irrespective of the area brought under cultivation. In the villages in the plains settlement is made annually with the cultivators, the ordinary rates charged being Rs. 3 per acre for homestead, Rs. 1-8 for transplanted rice land, and Rs. 1-2 for land growing other crops. About one-third of the settled area falls within the boundaries of the estates of the neighbouring *zamīndārs*, who receive 75 per cent. of the collections, but are not allowed to interfere in the management.

The revenue realized from house tax and the total revenue are shown in the following table, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Revenue from house tax	14	35	40	40
Total revenue . .	16*	1,05	1,18	1,84

* Exclusive of forest receipts.

Police and jails. The peace of the District is maintained by a battalion of military police, with a sanctioned strength of 24 officers and 178 men, under the command of the District Superintendent of police. The civil police force consists of one sub-inspector and 66 head constables and men, who are employed only in the villages at the foot of the hills. There is a small jail at Turā, with accommodation for 36 prisoners.

Education. Education is in a very backward condition. The number of pupils under instruction in 1880-1, 1890-1, 1900-1, and 1903-4 was 458, 593, 1,538, and 1,870 respectively. At the Census of 1901 only 0·8 per cent. of the population (1·5 males and 0·2 females) were returned as literate. Primary education, which is largely in the hands of the American Baptist Mission,

has made considerable progress of recent years. In 1903–4 there were 94 primary schools in the District, and one training school. The number of girls under instruction was 276. Of the male population of school-going age 15 per cent., and of the females 3 per cent., were under instruction. The expenditure on education was Rs. 11,000, of which only Rs. 98 was derived from fees.

Hospitals and dispensaries. The District contains 2 hospitals and 2 dispensaries, with accommodation for 15 in-patients. In 1904 the number of cases treated was 19,000, of whom 200 were in-patients, and 300 operations were performed. The expenditure amounted to Rs. 5,000, the whole of which was met from Provincial revenues.

Vaccination. The Gāros are fully alive to the advantages of vaccination. In 1903–4, 77 per 1,000 of the population were protected, and nearly half the population were vaccinated between 1896 and 1900. The result is that small-pox has been almost stamped out in the hills, and deaths from that disease are very rare.

[A. Mackenzie, *History of the Relations of Government with the Hill Tribes of the North-East Frontier of Bengal* (Calcutta, 1884); Sir W. W. Hunter, *A Statistical Account of Assam* (1879); B. C. Allen, *District Gazetteer of the Gāro Hills* (1906).]

Turā.—Head-quarters of the Gāro Hills District, Eastern Bengal and Assam, situated in 25° 31′ N. and 90° 14′ E. The village has been built on a small plateau about 1,300 feet above the level of the sea, and the range from which it takes its name rises immediately behind it to a height of about 4,500 feet. It is connected by cart-road with Dālu on the south and with the Rowmari steamer *ghāt* on the west. The population in 1901 was 1,375. Turā was fixed upon as the civil station when the Gāro Hills were formed into a separate District in 1869. Its situation is extremely picturesque, the station being surrounded by woods and nestling under the forest-clad hill, while the view from the village and from the mountain top is magnificent. The rainfall is, however, heavy (125 inches), and the climate is hot and very unhealthy, the low, densely wooded hills on every side being excessively malarious. Turā contains a small jail with accommodation for 36 prisoners, and a hospital with 15 beds, and is the head-quarters of a military police battalion and of a branch of the American Baptist Mission. The station has a good water-supply distributed by an aqueduct. The bazar is a centre of local trade, and contains a few shops owned by foreign traders.

ASSAM VALLEY DIVISION

Assam Valley.—Division in Eastern Bengal and Assam, consisting of the valley of the Brahmaputra between 25° 28′ and 27° 52′ N. and 89° 42′ and 96° 5′ E., shut in between the Himālayas on the north and the Assam Range on the south. The head-quarters of the Commissioner are at GAUHĀTI TOWN. The population of the Division at the last four enumerations was: (1872) 1,884,046, (1881) 2,252,003, (1891) 2,476,481, and (1901) 2,619,077. The slow rate of increase during the last decade is due to the exceptional unhealthiness that prevailed in the central portion of the valley. The total area is 24,605 square miles, and the density of population 106 persons per square mile, which is rather above that of Assam as a whole. In 1901 Hindus numbered 72 per cent. of the population, animistic tribes 18 per cent., and Musalmāns 10 per cent. Other religions included Jains (1,600), Buddhists (7,940), and Christians (12,526, of whom 11,151 were natives). The Division contains six Districts, as shown below:—

	Area in square miles.	Population, 1901.	Land revenue and cesses (1903-4), in thousands of rupees.
Goālpāra . . .	3,961	462,052	1,80
Kāmrūp . . .	3,858	589,187	13,51
Darrang . . .	3,418	337,313	7,82
Nowgong . . .	3,843	261,160	5,10
Sibsāgar . . .	4,996	597,969	15,63
Lakhimpur . . .	4,529	371,396	6,49
Total	24,605	2,619,077	50,35

The greater part of the Division consists of a level plain, lying on both sides of the Brahmaputra. In the centre is a tract of hilly country known as the MĪKĪR HILLS, which is cut off from the main mass of the Assam Range by the valleys of the Dhansiri and the Lāngpher. The Division contains 10 towns, rather more than half the total number in Assam, and 8,801 villages.

The largest towns are Gauhāti (11,661) and DIBRUGARH (11,227). The chief centres of trade are GOĀLPĀRA, BARPETĀ, Gauhāti, TEZPUR, and Dibrugarh. The Assamese have, how-

ever, no commercial aptitude; and the fact that tea is the principal industry of the Division prevents the formation of business centres, each large garden serving as a nucleus for local trade. KĀMĀKHYA and HĀJO in Kāmrūp, and the pool of BRAHMAKUND at the eastern end of the valley, are places of pilgrimage to which devout Hindus come from all parts of India. Gauhāti is locally identified with a town mentioned in the Mahābhārata, and Tezpur possesses interesting archaeological remains. SIBSĀGAR and NĀZIRĀ were the capitals of the Ahom kingdom.

Goālpāra District.—District of Eastern Bengal and Assam, forming the entrance to the upper valley of the Brahmaputra. It lies on both sides of the great river, extending from 25° 28′ to 26° 54′ N. and from 89° 42′ to 91° 6′ E., with an area of 3,961 square miles. It is bounded on the north by the mountains of Bhūtan; on the south by the Gāro Hills; on the east by Kāmrūp; and on the west by the Districts of Rangpur and Jalpaigurī and the State of Cooch Behār. The permanently settled portion of the District (as distinguished from the Eastern Duārs, which lie under the Bhutān hills) occupies the valley of the Brahmaputra, at the corner where the river leaves Assam proper and turns due south to enter the wide plain of Bengal. It is very irregularly shaped, extending for 65 miles along the northern bank of the Brahmaputra, and for 120 miles along its southern bank. The level land on the south bank forms but a narrow strip, in some parts not more than 8 miles across, being shut in by the ridges of the Gāro Hills. On the north, the country is much broken up by low ranges of hills running north and south, and exhibits a pleasing diversity of forest, lake, and marsh, interspersed with rice-fields and villages surrounded by groves of fruit trees and bamboos. The largest sheets of water are the Tāmrānga and Dhalni *bīls*, two picturesque lakes lying at the foot of the Bhairab hills in the east of the District, and the Dhir and Diple *bīls* a little to the west of that range. The EASTERN DUĀRS consist of a flat strip of country lying beneath the Bhutān mountains. The only elevated tract in these Duārs is the Bhumeswar hill, which rises abruptly out of the plains to the height of nearly 400 feet; but to the north they are shut in by the ranges of the Bhutān hills. The total area of the Duārs is 1,570 square miles, nearly the whole being covered with *sāl* forest and high grass jungle, among which are scattered the patches of cultivation that surround the villages of the Mech, who inhabit this tract.

Boundaries, configuration, and hill and river systems.

The principal rivers on the north bank of the Brahmaputra are the MANĀS, with its tributary the AI, the CHĀMPĀMATI, the SARALBHĀNGĀ or Gaurāng, the Gangia, and the SANKOSH. All these rise in the Bhutān hills and are navigable by country boats for a portion of their course throughout the year. Several other minor streams become navigable during the rainy season. A peculiar tract of pebbles, gravel, and sand, resembling the Bhābar tract in the Western Himālayas, borders the hills. The water of all the minor streams sinks into this during the greater part of the year, and does not again appear above ground till it reaches the alluvial clay. On the south bank the largest rivers are the JINJIRĀM and Krishnai, which rise in the Gāro Hills.

Geology. Geologically, the District consists of an alluvial plain composed of a mixture of clay and sand, with numerous outliers of gneissic rock.

Botany. As in the rest of Assam, enormous stretches of country are covered with high grass and reeds. The principal varieties are *ikra* (*Saccharum arundinaceum*), *nal* (*Phragmites Roxburghii*), and *khagari* (*Saccharum spontaneum*). *Sāl* (*Shorea robusta*) is common, and *khair* (*Acacia Catechu*) and *sissu* (*Dalbergia Sissoo*) are found in the west of the District, while evergreen forest clothes the foot of the hills.

Fauna. The larger fauna include elephants, rhinoceros, tigers, leopards, bears, bison (*Bos gaurus*), buffaloes, and several kinds of deer. Wild animals still do much damage; in 1904 they were responsible for the deaths of 685 animals and 12 human beings, though rewards were paid for the destruction of 257 tigers and leopards. Small game consists of partridges, jungle-fowl, florican, wild ducks, quail, and peafowl.

Climate and rainfall. Fogs are not common, and the winter is milder and the spring hotter than in Upper Assam. In January, the coldest month of the year, the mean temperature is 63°. The rainy season, on the other hand, is comparatively cool, and in no month does the mean temperature exceed 83°. The Eastern Duārs and the *tarai* at the foot of the Gāro Hills are excessively malarious, but the centre of the District is fairly healthy. Near the Brahmaputra the annual rainfall averages from 80 to 90 inches; but in the Eastern Duārs, which are near the hills and covered with dense forest, it is 60 or 70 inches higher.

Earthquakes and storms. Goālpāra, like the rest of Assam, is subject to earthquakes. At the beginning of the nineteenth century a village near Goālpāra town is said to have been swallowed up in one

of these convulsions of nature, and the great earthquake of 1897 did much damage. The town of Goālpāra was wrecked and the masonry buildings at Dhubri were injured. The houses in the interior are, however, usually made of reeds and bamboos; and the majority of the people, especially on the south bank of the Brahmaputra, suffered more from the floods which followed than from the earthquake itself. The causes of these floods are somewhat obscure; but it is believed that in places the level of the country sank, and that the silting up of the river-beds obstructed the natural drainage of the country. In 1900 a cyclone of extraordinary violence swept over a portion of the south bank of the Brahmaputra. The path of the storm was only about 10 miles long and a quarter of a mile wide; but within this area everything was levelled with the earth, and 118 persons were killed or injured.

History. Little is known of the history of the earlier Hindu dynasties that reigned in the Assam Valley, and none of them was closely connected with Goālpāra. At the beginning of the sixteenth century the Koch race rose to power under Biswa Singh, whose son Nar Nārāyan waged war successfully against the Ahoms and the Rājās of Cāchār, Jaintiā, Sylhet, and Tippera. Before his death the kingdom was divided; and Goālpāra, with Kāmrūp and Darrang, was made over to his nephew, Raghu Rai, who is claimed as the ancestor of the present Bijni family. Raghu Rai's son, Parīkshit, was defeated by the Muhammadans in 1614; and the District was then incorporated in the Mughal empire, though the struggle between the Muhammadans and the Ahoms went on for some years longer. After the English obtained the *dīwāni* of Bengal in 1765, Goālpāra town continued to be a frontier outpost, and a considerable trade was carried on from there, and from JOGIGHOPĀ on the opposite bank of the Brahmaputra, between European merchants and the Assamese.

On both the north and south the District has been exposed to trouble from the tribes inhabiting the hills that form its boundaries. The country south of the river was continuously raided by the Gāros, and hundreds of lives were taken, till the tribe was pacified by the posting of a European officer in the centre of the hills in 1886. The Eastern Duārs originally formed part of the territories of the Hindu Rājās; but during the conflicts between the Ahoms and the Muhammadans the Bhotiās succeeded in establishing their sovereignty over this territory, and it was only ceded to the British after the Bhutān War of 1865. The permanently settled portions

of Goālpāra originally formed part of the District of Rangpur, but were transferred to Assam after the annexation of the valley in 1826. In 1867 the whole of what is now Goālpāra District was included in the Commissionership of Cooch Behār, but in the following year it was placed for judicial purposes under the Judicial Commissioner of Assam. Finally, it was transferred to that Province when it became a separate Administration in 1874. There are hardly any objects of archaeological interest in the District.

The people.

The population of Goālpāra at each of the last four enumerations was: (1872) 387,341, (1881) 446,700, (1891) 452,773, and (1901) 462,052. The large apparent increase in 1881 was chiefly due to the inaccuracy of the first Census, and since that date the population has advanced but slowly. This has been chiefly due to the ravages of a peculiarly malignant form of malarial fever known as *kalā azār*. The District is divided into two subdivisions, DHUBRI and GOĀLPĀRA; and in the last named, the greater part of which lies south of the Brahmaputra, the population in 1901 was only about four-fifths of that recorded twenty years before. There are two towns in the District, DHUBRI and GOĀLPĀRA; and 1,461 villages.

The following table gives particulars of area, towns and villages, and population according to the Census of 1901:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Dhubri	2,959	1	1,076	329,102	111	+ 3·4	7,474
Goālpāra	1,002	1	385	132,950	133	− 1·1	4,869
District total	3,961	2	1,461	462,052	117	+ 2·0	12,343

At the Census of 1901, 44 per cent. of the population returned themselves as Hindus, 28 per cent. as Muhammadans, and 27 per cent. professed various forms of Animism. Goālpāra is not a part of Assam proper; and 69 per cent. of the population speak Bengali, while 18 per cent. speak Bodo or plains Kachārī, the people in the Eastern Duārs being exceptionally faithful to their tribal tongue.

Castes and occupations.

More than half the Hindu population are Rājbansis (115,800), but this is only a high-sounding name for the Hinduized section of the Koch or Bodo tribe. Brāhmans and other respectable

castes are not strongly represented. The principal unconverted tribes are the Mech (73,800), the Rabhās (27,100), and the Kachāris and Gāros. All of these are descended from the Bodo stock, and resemble one another closely in appearance, manners, and customs. Agriculture is the staple occupation, supporting 84 per cent. of the population in 1901.

Christian missions.

A branch of the American Baptist Mission is located at Goālpāra, and two-thirds of the native Christians in 1901 (3,429) were members of this sect. A colony of Christian Santāls has also been planted by missionary enterprise near Dingdingā Hāt, about 18 miles north of Dhubri.

General agricultural conditions.

The soil consists of clay mixed in varying proportions with sand. In the submontane tract it assumes an ochreous shade, due to the presence of iron. There is a considerable difference between the conditions prevailing in the north and the south of the District. In the Eastern Duārs the rice-fields are invariably irrigated from the hill streams, and, though the soil is sandy, the crop is generally a bumper one and is beyond all risk of flood. The permanently settled estates near the Brahmaputra are exposed to much injury from flood, and the harvest is far less certain; but famine and scarcity are unknown over the whole District.

Chief agricultural statistics and principal crops.

The area under different crops in the permanently settled estates is not known; but in 1903-4 it was estimated that the District contained 541 square miles under rice, 81 square miles under mustard, 41 square miles under jute, 33 square miles under pulse, and 16 square miles under wheat. Rice is of three varieties—*sāli*, which is transplanted and yields a large out-turn of good grain; *āsu*, which is usually sown broadcast and reaped before the floods rise; and *boa*, which is grown in marshy tracts, and sometimes has a stem nearly 20 feet in length. Wheat is raised in the east of Goālpāra, but is only grown by foreigners in small patches in the other Districts of Assam. Garden crops include tobacco, vegetables, the *pān* or betel-vine, and the areca-palm.

In 1903-4 the total area of the District was distributed as follows: Settled, 2,634 square miles; unsettled, 1,327 square miles; cultivated, 670 square miles; forests, 787 square miles.

Tea.

Goālpāra has never been exploited in the interests of the tea industry. The Eastern Duārs have an abundant rainfall, but the soil is rather sandy and the climate is said to be fatal to foreigners, while a large proportion of the land is covered with 'reserved' forest. In 1904 there were only four tea gardens in the District, with 700 acres under cultivation, which yielded

213,000 lb. of tea and gave employment to 2 Europeans and 508 natives.

Improvements in agricultural practice.

It is impossible to trace the progress or decline of agriculture with any degree of accuracy; but it is believed that the area under jute, tobacco, and wheat has considerably extended in recent years, whereas mustard has suffered from the floods, which leave the soil too wet and cold to allow the seed to germinate properly.

Cattle.

The buffaloes are of a fairly powerful stock, but the farm bullocks are undersized and generally in poor condition. The villagers disregard all the laws of breeding and pay little attention to their animals; and, though there is plenty of grazing ground on every side, the grass in the rainy season is very rank.

Irrigation.

Almost the whole of the rice crop in the Eastern Duārs is artificially irrigated. The cultivators combine to dig channels, sometimes several miles in length, through which they bring the water to their fields. No irrigation works have, however, been constructed by Government, and for assessment purposes no distinction is drawn between irrigated and unirrigated land.

Forests.

The Goālpāra forests are of considerable commercial importance. The Government Reserves in 1903–4 covered an area of 787 square miles, about 163 square miles of which are stocked with pure *sāl* (*Shorea robusta*). The principal forests, those of Ripu, Chirang, Bengtol, and Bijni, are situated at the foot of the Bhutān hills, about 36 miles from Dhubri. The Reserves are worked departmentally, as well as by private purchasers. The latter are usually local men, who take out permits for one or two hundred trees, which are logged in the forests, and towards the end of the rains brought down the various rivers to the Government dépôt at Bagribāri and to other places on the Brahmaputra. The difficulties of transport are considerable, but they have been to some extent overcome by the purchase of 6 miles of portable tramway. The experiment has proved a success, and the length of line will probably be increased. Most of the timber is purchased by traders from Bengal, where it is largely used for boat-building. Much difficulty is experienced in obtaining the labour required for departmental working and for the clearance of fire lines, though forest villages have been established and trees are granted free in return for work done. In addition to the regular Reserves, there were in 1903–4 558 square miles of 'unclassed' state forest, managed by the Revenue officials. Few good trees are left in this area, owing to the wasteful

practice, formerly in vogue, of levying revenue on the axe and not on the amount of timber extracted. A big trade in timber is also carried on by the *zamīndārs*, as their forests, though containing fewer large trees, are more accessible than the Government Reserves. Other trees found in the District are *khair* (*Acacia Catechu*) and *sissu* (*Dalbergia Sissoo*); but they are, as a rule, only of sporadic growth, and are thus of little value from a commercial point of view.

No minerals have been found in the District, except a little coal of inferior quality on the border of the Gāro Hills. **Minerals.**

The manufactures of Goālpāra are not of much importance, and consist of brass and bell-metal vessels, rough pottery, and basket-work. Cotton and silk cloths are also woven by the women of the family, but not to the extent usual in Assam proper. The silk cloths are sometimes sold, but the products of the loom are often insufficient for home requirements, and have to be supplemented by European goods. Gold and silver ornaments are also made, but only to order. **Arts and manufactures.**

The bulk of the trade of the District is carried on direct with Calcutta. The principal exports are mustard-seed, jute, timber, hides, fish, unhusked rice, silk-cloth, betel-nuts, and cotton and lac obtained from the Gāro Hills. The articles received in exchange are European piece-goods, salt, hardware, oil, tobacco, pulse, and mats. The chief centres of trade are GOĀLPĀRA, GAURIPUR, DHUBRI, and MANIKARCHAR. Bilāsipāra, on the north bank of the Brahmaputra, about 27 miles east of Dhubri, is a large timber dépôt; and a good deal of jute is exported from Pātāmāri, a village nine miles south of that town. The principal markets to which the Gāros come down to exchange their goods are Jirā, Nibāri, and DAMRĀ. The natives of the District have little aptitude for commerce, and most of the business is in the hands of merchants from Rājputāna or Bengal. The railway is not largely used for commercial purposes, owing to the necessity for transhipment at SARĀ *ghāt*; and the bulk of the traffic is by steamer or in country boats, which come up in large numbers to Goālpāra. Internal trade is carried on at weekly markets, of which there are a large number, and at fairs held on the occasion of religious festivals. The Bhotiās bring down a few ponies and a little rubber, but the total value of this trans-frontier trade is very small. **Commerce.**

The main artery of trade is the Brahmaputra, which flows through the District and receives numerous tributaries on either bank. At four stations on the river—namely, Dhubri, **Means of communication.**

Bilāsipāra, Goālpāra, and Dalgomā—passenger steamers call daily, and these are periodically visited by large cargo boats. The vessels are owned and managed by the India General Steam Navigation Company and the Rivers Steam Navigation Company, Limited. Country boats are largely used during the rains to bring produce from the interior. The Eastern Bengal State Railway opened a line to Dhubri in 1902, and the railway is being continued through the north of the District to a point opposite Gauhāti, the terminus of the Assam-Bengal Railway. Both the north and south trunk road run through the District, but the bulk of the land traffic goes by the local board road from Gauripur to Rahā in Barpetā. Speaking generally, Goālpāra is well supplied with means of communication. Altogether 464 miles of unmetalled roads were maintained in 1903-4, of which 225 miles were in the charge of the Public Works department. The larger rivers flowing from the Bhutān hills are still unbridged, and are crossed by ferries; and steam ferries ply across the Brahmaputra between Dhubri and Fakīrganj, and Jogighopā and Goālpāra.

District subdivisions and staff.

The District is divided into two subdivisions: DHUBRI, which is under the immediate charge of the Deputy-Commissioner; and GOĀLPĀRA, which is usually entrusted to a native magistrate. In addition to the Deputy-Commissioner, the District staff includes three Assistant Magistrates, a Forest officer, and an Executive Engineer, who is also in charge of the Gāro Hills District.

Civil and criminal justice.

The Deputy-Commissioner exercises the powers of a Sub-Judge, and the subordinate magistrates act as Munsifs. Appeals lie to the Judge of the Assam Valley, and from him to the High Court at Calcutta. Special arrangements have been made for the administration of civil justice in the Eastern Duārs, suited to the simple and uncivilized character of the inhabitants. Whenever possible, disputes are decided by *panchāyat*, and the chief appellate authority is the Commissioner. The people of the District are of a peaceful and law-abiding character, and there is little serious crime.

Land revenue.

For revenue purposes, Goālpāra consists of two distinct tracts: the area covered by the jurisdiction of the three *thānas* of Goālpāra, Dhubri, and Karaibāri as that jurisdiction stood in 1822; and the Eastern Duārs. After the failure of Mīr Jumla's expedition in 1663, Goālpāra was the frontier District held by the Mughal government, and only a nominal tribute was taken from the border chieftians. This tribute was originally paid in kind; but shortly before the Decennial Settlement

of 1793 it had been commuted to a cash payment, which was accepted, when the settlement was made permanent, as the land revenue demand of the estates from which it was drawn. The result is that an area of more than 2,373 square miles pays a revenue of only Rs. 11,411, which is less than half a farthing per acre, and probably does not exceed one-sixtieth part of the *zamīndārs'* receipts. The Eastern Duārs, which lie at the foot of the Bhutān hills, and cover an area of 1,570 square miles, were acquired from Bhutān in 1865, and are settled direct by Government with the ryots. Owing to the unhealthiness of the climate and the sparseness of the population, there is little demand for land in the Duārs. The rates assessed are lower than those in force in Assam proper, and over the greater part of this area the revenue demand is Rs. 1-8 per acre for homestead and winter rice land and 12 annas for high land. The Rājās of BIJNI and Sidli are entitled to settlement of estates covering 130,000 and 170,000 acres respectively in the Duārs that bear their names, as they were held to have acquired rights over this land when under the Bhutān government.

The land revenue and total revenue of the District are shown in the following table, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue	94	94	1,12	1,10
Total revenue	3,63*	4,79	5,52	4,82

* Exclusive of forest receipts.

Local and municipal government.

Outside the municipalities of DHUBRI and GOĀLPĀRA, the local affairs of each subdivision are managed by boards under the chairmanship of the Deputy-Commissioner and the subdivisional officer. The expenditure of these boards in 1903-4 was a little over one lakh, rather more than one-half of which was devoted to public works and one-fourth to education. The chief sources of income were the local cess and a substantial grant from Provincial revenues.

Police and jails.

For the prevention and detection of crime the District is divided into nine investigating centres, the force in 1904 consisting of 41 officers and 210 men, with 896 *chaukīdārs*, or village watchmen. There is a jail at Dhubri which can accommodate 28 male and 6 female prisoners, and a lock-up at Goālpāra.

Education.

Education is still very backward in Goālpāra. The number of pupils under instruction in 1880-1, 1890-1, 1900-1, and

1903–4 was 2,922, 4,931, 7,241, and 6,801 respectively. During the past thirty years the cause of education has, however, made considerable progress, and the number of pupils in 1903–4 was nearly three times that in 1874–5. At the Census of 1901, 2·7 per cent. of the population (4·9 males and 0·2 females) were returned as literate. There were 215 primary and 18 secondary schools in the District in 1903–4. The number of female scholars was 345. The enormous majority of the pupils under instruction were only in primary classes, and the number of girls who have advanced beyond that stage is insignificant. Of the male population of school-going age 14 per cent. are in the primary stage of instruction, and of the female population of the same age less than one per cent. The total expenditure on education in 1903–4 was Rs. 69,000, of which Rs. 11,000 was derived from fees.

Hospitals and dispensaries. The District possesses 3 hospitals and 11 dispensaries, with accommodation for 59 in-patients. In 1904 the number of cases treated was 93,000, of whom 600 were in-patients, and 1,400 operations were performed. The expenditure was Rs. 19,000, the greater part of which was met from Local and municipal funds.

Vaccination. About 34 per 1,000 of the population were successfully vaccinated in 1903–4, but this figure was much below the average for previous years. Vaccination is compulsory only in the towns of Dhubri and Goālpāra.

[Sir W. W. Hunter, *A Statistical Account of Assam*, vol. ii (1879); E. A. Gait, 'The Koch Kings of Kāmarūpa,' *Journal of the Asiatic Society of Bengal*, vol. lxii, part i; A. Mackenzie, *History of the Relations of the Government with the Hill Tribes of the North-East Frontier* (Calcutta, 1884); B. C. Allen, *District Gazetteer of Goālpāra* (1906).]

Dhubri Subdivision.—Subdivision of Goālpāra District, Eastern Bengal and Assam, lying between 25° 28′ and 26° 54′ N. and 89° 42′ and 90° 59′ E., with an area of 2,959 square miles. Part of the subdivision consists of a long and narrow strip between the Gāro Hills and the Brahmaputra, which, with the land immediately to the north of the river, is exposed to injury from flood, and is to some extent broken up by hills and marshes. The tract lying under the Himālayas, known as the Eastern Duārs, is free from both of these disabilities. The annual rainfall at Dhubri town averages 94 inches, but in the north of the subdivision it is about 130 or 140 inches. The population in 1901 was 329,102, compared with 317,781 in 1891, giving a density of 111 persons per square mile. The

Eastern Duārs are very sparsely populated. The head-quarters of the subdivision and District are at DHUBRI TOWN (population, 3,737). Mustard and long-stemmed rice are largely grown in the riverain tracts, and jute is an important crop. There is also a considerable area under wheat in the GAURIPUR estate, though this cereal is only grown in small patches in the rest of Assam. Almost all of the inhabitants are Mech and Rabhās, members of the great Bodo race, whose system of cultivation depends largely on irrigation, which enables them to raise large crops of rice from comparatively inferior soil. The subdivision contains 780 square miles of 'reserved' forest, most of which lies under the hills, and produces *sāl* (*Shorea robusta*). For administrative purposes, Dhubri is divided into the five *thānas* of Dhubri, Agamanio, Bilāsipāra, South Sālmāra, and Manikarchar, and contains 1,076 villages. The greater part of the subdivision is permanently settled.

Goālpāra Subdivision.—Subdivision of Goālpāra District, Assam, lying between 25° 52′ and 26° 30′ N. and 90° 9′ and 91° 6′ E., with an area of 1,002 square miles. The subdivision consists of a narrow strip of land between the Gāro Hills and the Brahmaputra, with the south-eastern portion of that part of the District which lies on the north bank of the great river. Low hills project into the plains from the Gāro range, and even appear on the other side of the Brahmaputra in the Sālmāra *thāna*, where they reach a height of nearly 1,700 feet. Much of the country lies low; and there are numerous swamps and marshes, and some sheets of water, like the Kumārakāta and Tāmrānga *bīls*, which even in the dry season are of considerable size. The annual rainfall at Goālpāra town averages 91 inches, but it is heavier towards the north. The subdivision was one of the first places in the Assam Valley to be attacked by *kalā azār*, and between 1881 and 1891 the population decreased by 18 per cent. The population in the latter year was 134,523, and by 1901 it had fallen to 132,950, a further decrease of one per cent. The density of population is 133 persons per square mile, as compared with 117 in the District as a whole. Mustard and long-stemmed rice are grown on the marshes near the river, but much injury is done by floods, which have been particularly severe since the earthquake of 1897. GOĀLPĀRA (population, 6,287) is the principal town and head-quarters of the subdivision, the magistrate in charge being usually a native of India. For administrative purposes the subdivision is divided into the four *thānas* of Goālpāra, Dudhnai, Lakhipur, and North Sālmāra;

and contains 385 villages. The whole of the subdivision is permanently settled.

Duārs, Eastern.—The tract called the Eastern Duārs forms an integral portion of Goālpāra District in the Province of Eastern Bengal and Assam. It lies between 26° 19′ and 26° 54′ N. and 89° 55′ and 91° E., and is bounded on the north by the mountains of Bhutān; on the east by the Manās river, separating it from the District of Kāmrūp; on the south by the main portion of Goālpāra District; and on the west by the Gangādhar or Sankosh river, which separates it from the Western Duārs, attached to Jalpaigurī District, and the Bengal State of Cooch Behār. Area, 1,570 square miles; population (1901), 72,072.

The Eastern Duārs form a flat strip of country, lying beneath the Bhutān mountains. The only elevated tract is Bhumeswar hill, which rises abruptly from the plains to the height of nearly 400 feet, and may be regarded as a detached spur of the Gāro Hills on the south of the Brahmaputra. The remainder is level plain, intersected by numerous streams, and overgrown with wild vegetation. In some parts stretch extensive tracts of *sal* forest; but the greater portion is covered with heavy grass and reed jungle, amid which the beautiful cotton-tree (*Bombax malabaricum*) is the only timber to be seen. The villages are enclosed by a fence of split bamboos to keep out deer. A few bamboos and plantain-trees stand in the enclosure, but there is none of that luxuriant jungle of bamboos, areca-palms, and plantain-trees in which the Assamese village is usually embedded. At the foot of the mountains, where the rivers debouch upon the plain, the scenery assumes a grander aspect. The principal rivers are the Manās, Chāmpāmati, Gaurāng, Gangia, Gurupala, and Gangādhar, which are navigable by country boats, for a portion at any rate of their course, throughout the year; and, in addition, numerous small streams become navigable during the rainy season. By far the most important channel of communication is afforded by the Manās, which might be navigated by steamers of light draught. All the rivers take their rise in the Bhutān hills, and flow in a southerly direction into the Brahmaputra. Their beds are filled with boulders in the hills, but they become sandy as they advance into the plain. A peculiar tract of pebbles, gravel, and sand, resembling the Bhābar in the United Provinces, fringes the hills; and the water of all the minor streams sinks here, during the greater part of the year, not again appearing above ground until it reaches the alluvial clay.

The Eastern Duārs were annexed in 1865 after the military operations which the Bhutān government had provoked by their repeated aggressions on British subjects, and the gross insults to which they subjected the envoy who had been sent to demand redress. They were at first placed in charge of a Deputy-Commissioner, with his head-quarters at the village of Datmā, in the Goālpāra *pargana* of Khuntaghat. In December, 1866, they were incorporated with the District of Goālpāra, and have since shared in all the changes of jurisdiction by which that District has been transferred between Bengal and Assam.

Rice is the staple crop raised in the Duārs. The soil is often light and sandy; but the villagers combine to cut small channels through which they convey the water from the hill streams to their fields, and by this means succeed in raising bumper harvests. Mustard is also grown in the Bijni Duār, but other crops are not of very much importance. The Eastern Duārs are, however, very sparsely peopled, and in 1903–4 nearly 93 per cent. of the total area was either waste or forest land. They are altogether five in number: Bijni, area 374 square miles, population (1901) 25,859; Sidli, area 361 square miles, population 31,509; Chirang, area 495 square miles, population 1,081; Ripu, area 242 square miles, population 2,425; and Guma, area 98 square miles, population 11,198.

For the purposes of land revenue collection Chirang, Ripu, and Guma form two *mauzas*, and Sidli three, while Bijni is under the direct management of the Bijni Rājā. When the Duārs were first annexed, the Bijni Rājā laid claim to the Bijni Duār, on the ground that he had occupied the position of hereditary proprietor of this estate under the Bhutān government. Similar claims were put forward to the whole of the Sidli Duār by the Sidli Rājā. Settlement for a period of seven years was accordingly made in 1870 with the Sidli Rājā, and with the Court of Wards on behalf of the minor Rājā of Bijni. In 1882 the Government of India decided that 130,000 acres should be assigned to the Bijni Rājā and 170,000 acres to the Sidli Rājā. Settlement was, however, refused by both Rājās, and the estates continued under Government management, the Sidli Rājā receiving 20 per cent. and the Bijni Rājā 7½ per cent. of the gross revenue as *malikāna*. This arrangement is still in force as far as the Sidli Rājā is concerned; but a ten years' lease, which expires in 1911, has been issued to the Bijni Rānī, under which Government obtains 80 per cent. of the revenue demand for 1900–1. In the rest of the Duārs

settlement is made direct with the villagers. The rates assessed are Rs. 1–8 per acre on homestead or transplanted rice land, and 12 annas per acre on all other kinds of land. The rates originally assessed in Guma were even lower; but in 1893 in the part of Guma that lies west of the forest Reserves the acreage rates were raised to Rs. 3 for homestead land, Rs. 1–14 for land growing transplanted rice, and Rs. 1–8 for land under other crops.

Generally speaking, the Duārs are administered like any other jungly and unprogressive portion of the District; but in consideration of the primitive character of the inhabitants the Code of Civil Procedure has been declared to be not in force, and civil suits are decided either by *panchāyats* or by the Deputy-Commissioner and his assistants.

Gauripur.—A permanently settled estate in Goālpāra District, Eastern Bengal and Assam, lying between 25° 38′ and 26° 19′ N. and 89° 50′ and 90° 6′ E., and consisting of *parganas* Ghurlā, Jāmirā, Makrampur, and Kalumalupāra, with other smaller *parganas*. The estate covers an area of 583 square miles, and the rent roll is about Rs. 2,34,000; but the land revenue demand is only Rs. 5,396, and the demand on account of cesses Rs. 25,000. This extremely low rate of assessment is due to the fact that under Mughal rule Goālpāra was a frontier District. The *zamīndārs* were required to keep the peace of the marches, and in return to pay a tribute that was little more than nominal. At the time of the Permanent Settlement this tribute was accepted as the land revenue, though no settlement was ever made in detail, and it is doubtful whether the District ever came within the purview of the Permanent Settlement at all. The family seat of the *zamīndār* is at Gauripur, which is a flourishing village about 6 miles north of Dhubri. It contains a high school, a dispensary, and a busy market. A colony of Mārwāri merchants carry on a large trade in jute, grain, and piece-goods; and the place contains blacksmiths, wheelwrights, potters, goldsmiths, confectioners, and the complement of shopkeepers and artisans found in a small Indian town.

Bijni.—Estate in Goālpāra District, Eastern Bengal and Assam, lying between 25° 53′ and 26° 32′ N. and 90° 85′ and 91° 85′ E., in possession of the Bijni family, descended from the Koch king, Nar Nārāyan, who reigned over Kāmarūpa from 1534 to 1584. Nar Nārāyan's armies were victorious from Gargaon and Manipur in the east to Jaintiā and Tippera in the south; but before his death he allowed his kingdom to

be divided between his son Lakshmī Nārāyan and his nephew Raghu Rai. Raghu Rai established his capital at Barnagar in the Barpetā subdivision, and received as his share the Koch territories lying to the east of the Sankosh. He was succeeded by his son Parīkshit, who quarrelled with Lakshmī Nārāyan and was defeated by the Muhammadans, whom the latter summoned to his assistance. Parīkshit's son, Vijita Nārāyan, was confirmed by the Musalmāns as *zamīndār* of the country between the Manās and the Sankosh, and from him the present Bijni family is descended. Under Mughal rule the Rājā paid a tribute of Rs. 5,998, which was afterwards commuted to an annual delivery of 68 elephants. Difficulty was experienced in realizing the tale of the animals in full, and in 1788 it was decided to revert to a money payment, which was fixed at Rs. 2,000 per annum. It is doubtful whether Goālpāra was ever included in the Decennial Settlement which was made permanent in 1793, but this small assessment has always been accepted in lieu of land revenue, though it has sometimes been argued that it is nothing more than tribute. The family now pay a revenue of Rs. 1,500, and cesses amounting to nearly Rs. 19,000, for an estate which covers an area of 950 square miles and has an estimated rent-roll of 2 lakhs of rupees.

On the conclusion of the Bhutān War, the Bijni family put forward claims to hold a large tract of land in the EASTERN DUĀRS, of which they alleged that they were in possession under the Bhutān government. The claim was admitted, and in 1870 a settlement was effected with the Court of Wards on behalf of the minor Bijni Rājā. The precise extent of the estates to which they were entitled was still a matter of uncertainty, but in 1882 it was ruled by the Government of India that the Rājā should receive 130,000 acres. These estates have generally remained under the direct management of Government; but since 1903 a lease has been granted to the Rānī, by which she retains 20 per cent. of the revenue demand.

Damrā.—Village in Goālpāra District, Eastern Bengal and Assam, situated in 25° 56′ N. and 90° 47′ E., near the foot of the Gāro Hills. For many years this place has been a mart where the Gāros exchange their cotton and lac for the products of the plains. In 1863 a native Christian colony was started in the neighbourhood, which has attained a considerable measure of success. The settlement consists of about 150 houses, out of which at least 100 families are Christians. These Gāro converts have built school-houses and a chapel; they support their own pastor, and contribute towards the

maintenance of the schools, and of six evangelists who are working among the unconverted hillmen.

Dhubri Town.—Head-quarters of Goālpāra District, Eastern Bengal and Assam, situated in 26° 1′ N. and 89° 59′ E., on the right bank of the Brahmaputra, at the point where the river turns south to enter the plains of Bengal. The town is connected by the Eastern Bengal State Railway with Calcutta, and is a port of call for the river steamers, while a steam ferry on the Brahmaputra connects it with the trunk road that runs along the south bank of the river to the eastern end of the Assam Valley. It occupies a small spit of land about one-third of a square mile in area, which suffers severely from the erosive action of the river. The population shows no tendency to increase; it was 2,893 in 1881, 4,825 in 1891, and 3,737 in 1901.

The head-quarters of the District were transferred from Goālpāra to Dhubri in 1879; and, in addition to the usual public offices, the town contains a small church, a jail with accommodation for 34 prisoners, a public library, and a marble statue of Queen Victoria. Dhubri was constituted a municipality under (Bengal) Act V of 1876 in 1883, and (Bengal) Act III of 1884 was applied to it in 1901. The municipal receipts and expenditure during the ten years ending 1902–3 averaged Rs. 10,500. In 1903–4 the income was Rs. 14,000, chiefly derived from a tax on houses and lands (Rs. 2,700) and fees from markets (Rs. 5,000); while the expenditure was Rs. 13,800, including conservancy (Rs. 3,600) and public works (Rs. 5,700). There is a considerable export trade in jute; but business is tending to leave the town for other centres, such as Bagribāri and Gauripur, as merchants are unwilling to sink money in warehouses at a place which is liable to be carried away by the river. The chief educational institution is a high school, which in 1903–4 had an average attendance of 154 boys.

Goālpāra Town.—Town in the District of the same name, Assam, situated in 26° 10′ N. and 90° 38′ E., on the south bank of the Brahmaputra. Population (1901), 6,287. Prior to the annexation of Assam, Goālpāra was a frontier station of the Company's territories; and a colony of Europeans who settled there forcibly acquired a monopoly of the Bengal trade, and then engaged in lucrative transactions with the natives, who enjoyed a similar monopoly of the trade of Assam. The first attempt by the British to interfere in the internal affairs of the Assam kingdom was made by a salt-farmer named Raush,

who in 1788 dispatched 700 sepoys from Goālpāra to aid the Rājā against his revolted subjects; but not one of these soldiers is said to have returned. A pile of masonry, the size of a small cottage, which covers the remains of Raush's two infant children, stands on the side of a low hill overlooking the river. A magnificent view is obtained from this spot over the valley of the Brahmaputra, which is here much broken by low forest-clad hills and is bounded on the north by the snow-capped Himālayas. Most of the public offices stand on the hill, and have been rebuilt since the earthquake of 1897, which destroyed all masonry buildings and caused the native town, which stands on the plain at the west, to sink below flood-level. Embankments fitted with sluice-gates have recently been constructed to protect the town from the floods of the Brahmaputra; but the lower parts are waterlogged by accumulations of rain-water, which cannot be drained off till the river falls, and the shops and houses present a very dilapidated appearance. In 1879 the head-quarters of the District were removed from Goālpāra to Dhubri, and since that date it has been a subdivisional station.

Goālpāra was constituted a municipality in 1878. The receipts and expenditure during the ten years ending 1902–3 averaged Rs. 6,000, the chief source of income being house tax, and the main items of outlay conservancy and public works. In 1903–4 the income and expenditure were Rs. 7,200 and Rs. 6,300 respectively. In addition to the magistrate's court and lock-up, the public buildings include a high school with an average attendance of 106 boys, and a dispensary with 18 beds. A branch of the American Baptist Mission is located in the town. Goālpāra is connected by road with Gauhāti and Dhubri, and is a port of call for steamers plying on the Brahmaputra. There is a considerable export trade in jute, mustard, cotton, lac, and *sāl* timber. The chief imports are salt, grain, oil, and cotton goods and twist. The wholesale trade is in the hands of Mārwāri merchants, but the majority of the retail shopkeepers are Muhammadans from Dacca.

Jogighopā.—Village in Goālpāra District, Eastern Bengal and Assam, situated in 26° 14′ N. and 90° 34′ E., on the north bank of the Brahmaputra at the point where it is joined by the Manās. Population (1901), 734. A steam ferry plies between Jogighopā and Goālpāra town, and the telegraph wires are carried beneath the river at this point to the south bank. Prior to the annexation of Assam, Jogighopā was a frontier outpost of Bengal, and a number of Europeans resided here, who forcibly

obtained a monopoly of the Bengal trade and were thus enabled to do a lucrative business with the natives who enjoyed similar privileges in Assam. Four large tombs remain as evidence of their occupation, but the inscriptions have disappeared. Jogighopā derives its name from some caves cut out of the rocks near the river bank, which at one time used to be occupied by ascetics. The place is now of little importance, but contains a *tahsīli* belonging to the Bijni estate.

Manikarchar.—Village in the extreme south-west of Goālpāra District, Eastern Bengal and Assam, situated in 25° 32′ N. and 89° 53′ E., near the Gāro Hills frontier. Population (1901), 3,870. The village contains a large bazar and a bi-weekly market, where a considerable trade is carried on in cotton and other products of the Gāro Hills, jute, and mustard. The principal merchants are Mārwāris from Rājputāna and Muhammadans from Dacca. The public buildings include a dispensary.

Rangāmāti.—Small village in the east of Goālpāra District, Eastern Bengal and Assam, situated in 26° 19′ N. and 90° 36′ E. It was for many years the frontier outpost of the Muhammadans, the country farther east being occupied by the Ahoms.

Boundaries, configuration, and hill and river systems.

Kāmrūp.—District of Eastern Bengal and Assam, lying between 25° 43′ and 26° 53′ N. and 90° 39′ and 92° 11′ E., with an area of 3,858 square miles. It is bounded on the north by Bhutān; on the east by Darrang and Nowgong; on the south by the Khāsi Hills; and on the west by Goālpāra.

The Brahmaputra flows through the District, and divides it into two unequal portions, about two-thirds of the total area being on the right or northern bank. South of the Brahmaputra the country is much broken by the outlying spurs of the Khāsi Hills which project into the valley, and low ranges of hills appear even on the north bank of the river. The scenery is thus pleasingly diversified, and the Gauhāti reach, enclosed in a circle of forest-clad hills, is extremely beautiful. The centre of the District is a broad plain, the greater part of which is covered with rice-fields, with dotted groves of bamboos concealing the villages of the Assamese; but farther north the land becomes too high for rice cultivation, and grassy uplands stretch to the foot of the outlying ranges of hills. The principal tributaries of the Brahmaputra are: on the north bank, the Barnadī, which once formed the boundary between Darrang and Kāmrūp; the Baraliā; the Chaulkhoā, which empties itself into the Manās; and the Manās, a large river which formerly marked the boundary of Goālpāra District. These

rivers take their rise in the Himālayas, and the swiftness of their current frequently causes them to cut away their banks and change their courses. At the foot of the northern hills there is a tract of gravel and sand, in which many of the minor streams vanish, to appear again some distance farther off. On the south bank the only rivers of any importance are the DIGRU, the KULSI, and the Singrā. All over the District are found numerous swamps, or *bīls*, in many of which the water lies even during the dry season. The most extensive are the Dipār *bīl*, about 8 miles west of Gauhāti, the Bildārā *bīl* in the Palāsbāri *tahsīl*, and the Asuchi *bīl* in the Hājo *tahsīl*.

Geology. The plain is of alluvial formation, composed of sand and clay in varying proportions. South of the Brahmaputra low ranges of gneissic rock project from the Khāsi Hills, and outliers are found on the north bank of the river.

Botany. The base of the southern hills is forest-clad; but to the north the country is covered with short grass, and is destitute of trees. High reeds and jungle grass spring up in great luxuriance on all low-lying land, and the forest is rendered beautiful by great ferns and the graceful foliage of the creeping cane.

Fauna. Elephants and bison are still found in the low hills, and rhinoceros and buffaloes in the marshes; tigers, leopards, bears, hog, and several species of deer are not uncommon. In 1904, 12 men and 2,709 animals were killed by wild beasts, though rewards were paid for the destruction of 201 tigers and leopards. The principal kinds of small game are hares, partridges, wild ducks and geese, florican, and snipe.

Climate and rainfall. The climate of the District does not differ materially from that of the rest of the Assam Valley; between November and the middle of March it is cold and pleasant, but during the rest of the year warm and damp. The *tarai* at the foot of the Khāsi Hills is particularly unhealthy. The prevailing direction of the wind is from the north-east, and during the cold season fogs gather daily in the early morning over the valley of the Brahmaputra. The annual rainfall at Gauhāti averages only 67 inches, but near the hills 80 or 85 inches are received. The rainfall, though invariably abundant, is sometimes unfavourably distributed, and the rice crop suffers from the premature cessation of the monsoon.

Earthquakes. The greatest natural calamity from which Kāmrūp District has suffered was the earthquake of June 12, 1897. The Government offices and nearly all masonry buildings in

Gauhāti were wrecked, and roads and bridges were destroyed. The drainage of the District was obstructed, the levels appear to have been altered, and large tracts of fertile land were rendered unfit for cultivation. After the earthquake the floods of the Brahmaputra were of exceptional severity, and agriculture received a serious check.

History. The District originally formed part of the ancient Hindu kingdom of Kāmarūpa, which, according to the Jogini Tantra, included the whole of the Brahmaputra Valley, with Rangpur and Cooch Behār. One of the earliest kings, Bhagadatta, whose capital was situated at Prāgjyotishapura, the modern Gauhāti, is said to have fought on the losing side in the great war of the Mahābhārata; but the history of the country up to a recent date is involved in great obscurity. In the sixteenth century Kāmrūp formed part of the territory of the Koch dynasty. The king, Nar Nārāyan, waged successful war against the Ahoms and the Rājās of Cāchār, Jaintiā, Sylhet, and Tippera; but the kingdom was divided, and the territory east of the Sankosh, which includes the present Kāmrūp, was allotted to Nar Nārāyan's nephew, Raghu Rai, while his son Lakshmī Nārāyan retained as much of the kingdom as lay west of that river. Disputes soon broke out between the two branches of the family, and the Muhammadans were called in on one side, the Ahoms on the other. The struggle between these powers continued for some years, but the Muhammadans at last succeeded in inflicting a decisive defeat upon their opponents, and occupied Gauhāti in 1637. This was not, however, the first occasion on which the Muhammadans had invaded Assam. At the beginning of the thirteenth century expeditions had been dispatched up the valley of the Brahmaputra; but the raiders, though for a time successful, were unable to retain their hold upon the country. Two of their leaders in the sixteenth century are still well remembered: Turbak, the remnants of whose army were finally converted into the degraded Muhammadan caste known as Moriās; and Kālā Pāhār, who is said to have partially destroyed the sacred temples at Kāmākhya and Hājo. The last and greatest invasion was that of Mīr Jumla in 1660–2. This general, though at first successful, was subsequently overcome by the difficulties of the climate and the country, and was compelled to retreat with the loss of all his guns. The Muhammadan frontier was then fixed at Goālpāra, and Kāmrūp was absorbed into the Ahom kingdom, Gauhāti becoming first the headquarters of the viceroy of Lower Assam, and at the end of

the eighteenth century of the Rājā himself. By this time the power of the Ahom king had been completely undermined, and Captain Welsh was sent into the valley in 1792 to put a stop to the anarchy then prevailing. He was recalled two years later; and Assam again became a scene of internecine struggles, which culminated in the occupation of the Burmans, who ravaged the Province with fire and sword. In 1826, after the first Burmese War, Kāmrūp, with the rest of the valley of the Brahmaputra, was ceded to the British. The Duārs at the foot of the Himālayas remained, however, in possession of the Bhotiās till 1841. In that year they were annexed and compensation paid to the hillmen for their loss of territory. On the outbreak of the Bhutān War in 1864, Dewāngiri was occupied by British troops, but they subsequently retired from the post with undue precipitation. The village was recaptured in April, 1865, and since that date has formed a part of British territory. The head-quarters of the Assam Division were originally fixed at Gauhāti; but in 1874, when Assam was separated from Bengal, Shillong was chosen as the seat of government.

Gauhāti contains numerous tanks and temples, and is surrounded by extensive earthworks, which bear witness to the importance of the kingdom of which it formed the capital. The remains of a large number of Hindu temples are scattered over the District, the most important being those at KĀMĀKHYA just below Gauhāti, and at HĀJO, about 15 miles by road north-west of that place. Archaeology.

The population of the District at the last four enumerations was: (1872) 561,681, (1881) 644,960, (1891) 634,249, and 1901 (589,187). The decrease in the last two decades is due to the ravages of a peculiarly malignant form of fever known as *kalā azār*, and to general unhealthiness; but it is believed that since 1899 the population has been again increasing. The District is divided into two subdivisions, GAUHĀTI and BARPETĀ, with head-quarters at the towns of the same name, and contains 1,716 villages. The table on the next page gives the area, number of towns and villages, and population according to the Census of 1901. The people.

Hindus formed 69 per cent. of the population, and Muhammadans 9 per cent., while 21 per cent. were animistic tribesmen. How little the District has been affected by outside influences can be judged from the fact that 83 per cent. of the population in 1901 spoke Assamese and 11 per cent. Bodo or plains Kachārī; while only 3 per cent. of the population

enumerated there had been born outside its boundaries. Kāmrūp is further peculiar in that the women exceeded the men in numbers.

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Barpetā . .	1,274	1	600	115,935	91	− 14·5	4,520
Gauhāti . .	2,584	1	1,116	473,252	183	− 5·0	16,228
District total	3,858	2	1,716	589,187	153	− 7·1	20,748

Castes and occupations.

The principal Hindu caste is the Kalitā (115,600), a respectable caste supposed to be the descendants of Aryans who had immigrated to Assam before the functional division of caste was introduced into Bengal. The Koch, into whose ranks converted Kachāris are received, are also numerous (93,800), and so are the Kewats (41,600). The Shāhās (14,100) are by tradition liquor-sellers, but have taken to agriculture, and have succeeded in obtaining a respectable position in Assamese society. The District contains many shrines, and Brāhmans (23,100) are found in much larger numbers than in the rest of the Assam Valley. The principal aboriginal tribes are the Kachāris (92,100) and the Rabhās, who are closely akin to them (16,300), the Mīkīrs (10,600), the Gāros, and the Lalungs. All of these tribes are members of the great Bodo race, which is supposed to have entered the valley from North-Western China many centuries ago. Agriculture supports 81 per cent. of the population, a lower proportion than in the other plains Districts of the Province. The number of priests, fishermen, and beggars is, however, unusually high, the strength of the last-named class giving some indication of the misfortunes which Kāmrūp has recently experienced. There is a branch of the American Baptist Mission at Gauhāti, and the great majority of the native Christians (1,379) in 1901 are members of that sect.

General agricultural conditions.

Broadly speaking, the District on either side of the Brahmaputra is divided into three belts of land with different characteristics. The first is the *chapari*, or tract bordering on the river, which is subject to deep inundation during the rains, but dries rapidly at the approach of the cold season. The soil is usually a light loam, on which rank jungle springs up with great rapidity, but which yields, when cultivated, excellent crops of mustard and summer rice, though the latter is liable

to be destroyed by an early rise of the river. Permanent villages are never found here, and the land is generally abandoned after it has been cultivated for two or three years. This riverain tract merges gradually into a broad plain, in which transplanted winter rice (*sāli*) is the staple crop; in the intermediate stage, where the water lies too deep to admit of transplantation, *bao*, a long-stemmed variety of winter rice, is sown broadcast. Lastly, the high land under the hills is well drained and free from risk either of flood or drought, as it can be irrigated from the hill streams. Here the staple crop is *sāli*, or transplanted *āhu* (*kharma*), which is reaped in November and yields a much larger out-turn than the same rice when sown broadcast. The soil of the District varies from pure sand to a stiff clay which is useless for any kind of crop. The most fertile variety is a deep soft loam, which is found in the lowest part of the rice basins. The crops depend, however, more on the water-supply than upon the intrinsic fertility of the soil, and in the central and submontane tract the supply of water is generally adequate. The chief danger to which agriculture is exposed is from floods, which have been especially severe since the drainage channels silted up at the time of the earthquake of 1897. Steps have, however, been taken by both Government and the villagers to re-excavate these channels.

Chief agricultural statistics and principal crops.

The main agricultural statistics of the District in 1903–4 are shown in the following table, in square miles:—

Subdivision.	Area shown in the revenue accounts.			Forests.
	Settled.	Unsettled.	Cultivated.	
Barpetā . . .	199	1,075	159	...
Gauhāti . . .	825	1,759	639	149
Total	1,024	2,834	798	149

The staple food-crop is rice, which in 1903–4 covered 718 square miles, or 76 per cent. of the total cropped area. Rather more than half of the rice crop was *sāli*, 31 per cent. was *āhu*, and 20 per cent. *bao*. Other important crops are mustard (95 square miles), pulse (35), and sugar-cane. Mustard and pulse are usually grown along the banks of the Brahmaputra, on land afterwards occupied by summer rice.

Tea.

When Gauhāti was the head-quarters of the Commissioner of Assam, a considerable number of tea gardens were opened in the neighbourhood of the town. In many cases, however,

the sites were badly chosen, and the tea was planted on steep and rocky hill-sides, where the rain washed all the fertility from the soil. The seed employed was inferior, the rainfall insufficient, and a large proportion of the gardens proved to be unable to compete with the more prosperous estates of Upper Assam. The result was that the area under tea fell from 6,302 acres in 1882 to 3,659 in 1904. In the latter year 19 gardens yielded 735,000 lb. of manufactured tea, and gave employment to 7 Europeans and 2,416 natives, most of whom had been brought from other parts of India.

Improvements in agricultural practice.

The cultivation of jute on a commercial scale has recently been introduced, but the industry is still in its infancy; and, apart from this, nothing has been done to develop the staples of the District, or to break up the large area of unsettled waste land. On the contrary, the area settled at full rates decreased by 12 per cent. between 1891 and 1901, owing to the decline in population and the injury done by the earthquake. Since 1901 there has, however, been a satisfactory extension of cultivation. Agricultural loans were first made in 1902, and during the next three years about Rs. 49,000 was advanced.

Cattle.

The Assamese are utterly indifferent to all the laws of breeding and to the comfort of their animals, and the native cattle are in consequence poor undeveloped creatures. The indigenous buffaloes are, however, larger and stronger than those of Bengal. The ponies brought down from the hills by the Bhotiās are sturdy little animals, and the Bhutān cattle also are a fine breed, but cannot be obtained in large numbers.

Irrigation.

The only irrigation works in the District are the small channels dug by the Kachāri villagers in the submontane tracts, to bring the water of the hill streams to their fields. Some channels, though only a few feet wide, are several miles long, and are capable of irrigating 3,000 or 4,000 acres. They are constructed by the combined labour of the villagers without any intervention on the part of Government. Embankments for flood protection and drainage channels are, however, more necessary than irrigation works.

Forests.

There were 30 forest Reserves in Kāmrūp in 1903–4, with a total area of 149 square miles. The principal Reserves are those at Pantan and Barduār (59 square miles), which are situated on the banks of the Kulsi river about 30 miles west of Gauhāti; and many of the other forests are small patches, only one or two square miles in area. By far the most important timber tree in Kāmrūp is *sāl* (*Shorea robusta*); but *tita sapa* (*Michelia Champaca*), *ajhar* (*Lagerstroemia Flos Reginae*), *sam*

(*Artocarpus Chaplasha*), and *gunserai* (*Cinnamomum glanduliferum*) are also found. The area of 'unclassed' forests was 2,294 square miles; and, though only a small portion is actually covered with timber, the out-turn from these forests is larger than from the Reserves. There is a small plantation of teak and rubber-trees on the Kulsi near the Barduār forest.

Minerals. No minerals are worked in Kāmrūp, but deposits of lime are said to exist at the foot of the Bhutān hills.

Arts and manufactures. Manufactures, apart from tea, are unimportant. In each house there is a rough loom, on which the women of the family weave silk and cotton cloths. The silk cloths, which are usually made from the thread of the *eri* worm (*Attacus ricini*), are often sold; the cotton cloth is reserved for home use. Gold filigree-work is made at Barpetā; but, though there are a number of jewellers in the District, articles are made only to order. Brass and bell-metal utensils, iron hoes and choppers, and rough pottery are also manufactured, though not in large quantities. Canoes are hollowed out of the trunks of large trees, the people of Barpetā being specially proficient in the art. Mustard oil is prepared in the ordinary country mill; and at Gauhāti there are two steam mills, where flour is ground, cotton ginned, and oil expressed.

Commerce. The general trade of the District is almost entirely in the hands of Mārwāris from Rājputāna; but there are a certain number of Muhammadan shopkeepers, and at Barpetā the Assamese, whose wits have been unusually sharpened by their contest with nature in that inhospitable spot, are as keen traders as the Mārwāris themselves. The principal exports are mustard seed, tea, cotton, lac, timber, and silk cloths. The articles received in exchange are rice, cotton yarn and piece-goods, grain and pulse, kerosene and other oils, hardware, and salt. The chief centres of trade are GAUHĀTI, BARPETĀ, SOĀLKUCHI, PALĀSBĀRI, RANGIĀ, NALBĀRI, Baramā, and Tāmulpur, while there are permanent shops at all the *tahsīl* head-quarters. Most of the internal trade is, however, transacted at the markets, of which a large number are held in different parts of the District. In the interior, as well as at Gauhāti, the principal shopkeepers are Mārwāris, who sell piece-goods, salt, grain, and oil, and not infrequently opium, and buy silk cloths, rice, and mustard-seed, for which they often make advances before the crop is cut. The bulk of the trade is with Bengal, and is carried by steamer, though when the rivers rise in the rains country boats penetrate into the interior. The only foreign trade is with Bhutān, whose subjects

come down through the Dewāngiri, Subankhātā, and Kakilābāri Duārs to fairs held at Darrangā and Subankhātā, and starting from these centres travel about the country. The principal imports from Bhutān are rubber, ponies, and blankets; the exports are cotton and silk cloths.

Means of communication. The Assam-Bengal Railway runs for 33 miles through the District to the Nowgong boundary, connecting Gauhāti with Dibrugarh, and with Chittagong via the North Cāchār hills. Through railway communication to Calcutta will be provided by a line now under construction, which will run from a point just opposite Gauhāti to Golakganj on the Dhubri extension of the Eastern Bengal State Railway. A daily service of passenger steamers and large cargo boats, owned by the India General Steam Navigation Company and the Rivers Steam Navigation Company, ply on the Brahmaputra, calling at Gauhāti, Soālkuchi, Palāsbāri, and Kholābānda. During the rains country boats come from Bengal, and proceed up the various rivers into the interior. Two trunk roads pass through the District, along the north and south banks of the river. In 1903-4 there were 16 miles of metalled and 160 miles of unmetalled roads maintained from Provincial funds, and 371 miles of unmetalled roads under the local boards. Generally speaking, Kāmrūp is well supplied with means of communication. A steam ferry crosses the Brahmaputra at Gauhāti.

Famine. As in other parts of Assam, famine is unknown in Kāmrūp; but in 1901 the rice crop was the poorest that had been reaped for many years, and there was local scarcity which necessitated some assistance from Government.

District subdivisions and staff. For general administrative purposes, the District is divided into two subdivisions: GAUHĀTI, under the immediate charge of the Deputy-Commissioner; and BARPETĀ, usually entrusted to a native magistrate. The sanctioned District staff includes five Assistant Magistrates, a Forest officer, and an Engineer who is also in charge of the Khāsi and Jaintiā Hills, and whose head-quarters are at Shillong.

Civil and criminal justice. The Deputy-Commissioner has the powers of a Sub-Judge, and certain of the Assistant Magistrates exercise jurisdiction as Munsifs. Appeals, both civil and criminal, lie to the District and Sessions Judge of the Assam Valley, whose head-quarters are at Gauhāti, while the High Court at Calcutta is the chief appellate authority. The Assamese are a quiet and peaceful people, and there is not much serious crime.

Land revenue. The land revenue system does not differ materially from that in force in Assam proper, described in the article on ASSAM.

The settlement is *ryotwāri*, being made direct with the actual cultivators of the soil, and is liable to periodical revision. The District contains a large area of waste land, much of which is fit for permanent cultivation; and the settled area in 1903–4 was only 27 per cent. of the total area, including rivers, swamps, and hills. Mustard and summer rice are seldom grown on the same land for more than three years in succession, and the villagers are allowed to resign their holdings and take up new plots of land on giving notice to the revenue authorities. In 1903–4, 31,000 acres were resigned and 47,000 acres of new land taken up. Fresh leases are issued every year for this shifting cultivation, and a large staff of *mandals* is maintained to measure new land, test applications for relinquishment, and keep the record up to date. Kāmrūp, like the rest of Assam proper, was last settled in 1893, and the average assessment per settled acre assessed at full rates in 1903–4 was Rs. 2–7–2 (maximum Rs. 4–2, minimum Rs. 1–11). The District is now being resettled after a detailed examination, in which the different classes of land have been more carefully discriminated. In recent years the people have suffered severely from exceptional unhealthiness and from the earthquake of 1897, which altered the levels of the country, causing obstructions to drainage and deposits of sand. An abatement of Rs. 60,000 has been made in the land revenue of the tracts most seriously affected. A special feature of the District is the large number of estates held revenue free (*lākhirāj*) or at half-rates (*nisfkhirāj*). These cover respectively an area of 53 and 229 square miles, and represent grants made by the Ahom Rājās, usually to priests or temples.

The following table shows collections of land revenue and total revenue, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue .	9,12	9,52	11,92	12,30
Total revenue .	13,25*	14,90	17,38	18,56

* Exclusive of forest receipts.

Outside the municipalities of GAUHĀTI and BARPETĀ, the local affairs of each subdivision are managed by a board, presided over by the Deputy-Commissioner and the subdivisional officer respectively. The expenditure of these boards in 1903–4 amounted to about Rs. 1,43,000, nearly two-fifths of which was devoted to public works. *Local and municipal government.*

For the prevention and detection of crime, the District

Police and jails.

is divided into 17 investigating centres, and the civil police force consisted in 1904 of 46 officers and 282 men. There are no rural police, their duties being discharged by the village headmen. During the winter 2 officers and 31 men of the Gāro Hills military police battalion are stationed in Kāmrūp, to hold the two outposts of Subankhātā and Darrangā. A District jail is maintained at Gauhāti, and a lock-up at Barpetā.

Education.

As regards education, Kāmrūp is fairly representative of Assam. The number of pupils under instruction in 1880-1, 1890-1, 1900-1, and 1903-4 was 6,261, 10,437, 12,346, and 12,951 respectively. Education has made considerable progress during the past thirty years, and nearly three scholars were under instruction in 1903-4 for every one in 1874-5. At the Census of 1901, 3·5 per cent. of the population (6·8 males and 0·2 females) were returned as literate. There were 285 primary, 15 secondary, and 5 special schools in 1903-4. The number of female scholars was 431. The enormous majority of the pupils under instruction are only in primary classes, and the number of girls who have advanced beyond that stage is extremely small. Of the male population of school-going age, 25 per cent. were in the primary stage of instruction, and of the female population of the same age less than one per cent. Among Muhammadans the percentage of the scholars of each sex to the male and female population of school-going age was 27 and 1 respectively. An Arts college is maintained by Government at Gauhāti. The total expenditure on education in 1903-4 was Rs. 1,17,000, of which Rs. 21,000 was derived from fees. About 29 per cent. of the direct expenditure was devoted to primary schools.

Hospitals and dispensaries.

The District possesses 2 hospitals and 8 dispensaries, with accommodation for 33 in-patients. In 1904 the number of cases treated was 64,000, of whom 600 were in-patients, and 1,100 operations were performed. The expenditure was Rs. 16,000, the greater part of which was met from Local and municipal funds.

Vaccination.

In 1903-4, 39 per 1,000 of the population were successfully vaccinated, which was considerably below the proportion for the Province as a whole. Vaccination is compulsory only in Gauhāti town.

[Sir W. W. Hunter, *A Statistical Account of Assam*, vol. i (1879); E. A. Gait, 'The Koch Kings of Kāmarūpa,' *Journal of the Asiatic Society of Bengal*, vol. lxii, p. 4; H. C. Barnes, *Assessment Reports, Bajāli, Bijni, Barbhag, Baska, Patida-*

rang, Ramdia, and South Bank groups (1905); B. C. Allen, *District Gazetteer of Kāmrūp* (1905).]

Barpetā Subdivision.—Subdivision of Kāmrūp District, Eastern Bengal and Assam, lying between 26° 5′ and 26° 49′ N. and 90° 39′ and 91° 17′ E., on the north bank of the Brahmaputra, with an area of 1,274 square miles. In 1901 the population was 115,935, compared with 135,705 in 1891. It contains one town, BARPETĀ (population, 8,747), the head-quarters; and 600 villages. The demand for land revenue and cesses in 1903–4 was Rs. 2,54,000. The subdivision is sparsely peopled, and there are only 91 persons per square mile, as compared with 153 in the District as a whole. The decrease of nearly 15 per cent. in the last intercensal period was due to exceptional unhealthiness and to the damage done by the earthquake of 1897. The annual rainfall averages 96 inches at Barpetā, but nearer the Himālayas it is considerably higher. The subdivision has always been liable to injury from flood, and since 1897 this liability has been seriously increased. Mustard was at one time extensively grown on the marshes that fringe the bank of the Brahmaputra, but the land now frequently remains too cold and wet to admit of a crop being raised. In the northern *mauzas*, which are almost exclusively inhabited by Kachāris, rich crops of rice are raised on fields irrigated from the hill streams. Elsewhere *bao*, a long-stemmed variety of winter rice, is the staple crop.

Gauhāti Subdivision.—Subdivision of Kāmrūp District, Eastern Bengal and Assam, lying between 25° 43′ and 26° 53′ N. and 90° 56′ and 92° 11′ E., on both sides of the Brahmaputra, with an area of 2,584 square miles. In 1901 the population was 473,252, compared with 498,544 in 1891. It contains one town, GAUHĀTI (population, 11,661), the head-quarters of the District; and 1,116 villages. The demand for land revenue and cesses in 1903–4 was Rs. 10,97,000. South of the river the country is much broken up by outlying spurs of the Assam Range and by isolated hills which crop up above the alluvium, but on the north a wide plain stretches right up to the frontier of Bhutān. The centre of this plain is densely populated, and in the Nalbāri *tahsīl* there are as many as 613 persons per square mile; but near the hills stretch large tracts of waste land, and the subdivision as a whole supports only 183 persons per square mile. The decrease during the last intercensal period was due to the ravages of *kalā azār*, malarial fever, and cholera. The annual rainfall at Gauhāti town averages only 67 inches, but

nearer the hills, both on the north and south, it is as much as 75 or 80 inches. The majority of the population consist of respectable Sūdra castes, such as the Kalitā and Kewat; but a large tract lying between the Gohain Kamala Alī and the Bhutān hills is almost exclusively occupied by the Kachāri tribe. *Sali*, or transplanted winter rice, forms the staple crop; but the subdivision was most injuriously affected by the earthquake of 1897, which covered some of the most valuable land with deposits of sand, and increased the liability to flood, from which the District was never free, by disturbing the beds of rivers and drainage channels. Mustard and *bao*, a long-stemmed variety of winter rice, are grown near the Brahmaputra, and in recent years jute has been raised on a commercial scale. The Kachāris in the north irrigate their fields from the hill streams; elsewhere drains and embankments rather than irrigation channels are required. The tea industry is of comparatively small importance. In 1904 there were 19 gardens with 3,659 acres under plant, which gave employment to 7 Europeans and 2,416 natives. The subdivision contains many places which are objects of pilgrimage to the devout Hindu, such as KĀMĀKHYA, HĀJO, Basistha, Umānanda, Aswakrānta opposite Gauhāti, where the footprint of Krishna is to be seen embedded in the rock, and Chitrāchal, where there is a temple dedicated to the nine planets, which marked the eastern boundary of Old Gauhāti.

Barpetā Town.—Head-quarters of the subdivision of the same name in Kāmrūp District, Eastern Bengal and Assam, situated in 26° 19′ N. and 91° 1′ E., on the right bank of the Chaulkhoā, connected by a cart-road with the Kholābānda *ghāt* on the Brahmaputra about 15 miles away. Population has steadily decreased during the last thirty years, and was only 8,747 in 1901. Barpetā is famous as the site of a *sattra* or religious college founded by the Vaishnav reformer Sankar Deb at the end of the fifteenth century. The ground surrounding the *sattra* is considered holy, and is crowded with native huts, huddled together in the most insanitary propinquity. The town has always been liable to flood; but since the earthquake of 1897 the annual inundations have been more extensive, and for some time the prisoners, the treasure, and the office records had to be kept in boats. It contains a hospital with four beds, and a high school which in 1903-4 had an average attendance of 113 boys. Barpetā was formed into a municipality in 1886. The receipts and expenditure during the ten years ending 1902-3 averaged

Rs. 10,000. In 1903–4 the income was Rs. 9,000, including taxes on houses and lands (Rs. 3,500) and a grant from Provincial revenues (Rs. 2,500); while the expenditure was Rs. 16,000, the chief items being conservancy (Rs. 3,300) and public works (Rs. 10,000). Barpetā is one of the few places in Assam where the Assamese have displayed any commercial aptitude. They retain all business in their own hands, and there is a considerable trade in mustard-seed and other country produce. The manufactures are not important, but include canoes, earthenware well rings, and artistic gold filigree work.

Dewāngiri.—Village on the extreme northern boundary of Kāmrūp District, Eastern Bengal and Assam, situated in 26° 52′ N. and 91° 28′ E., among the outlying ranges of the Himālayas. It stands among natural surroundings of great beauty, about 2,000 feet above the level of the sea. At the time of the Bhutān War Dewāngiri fort was held by a strong British force, who evacuated it under somewhat discreditable conditions, when attacked by the enemy early in 1865. It was subsequently retaken with considerable loss to the Bhotiās; upwards of 100 were killed in a blockhouse, in which they barricaded themselves and declined to surrender. The inhabitants are Bhotiās subject to the British Government, and just beyond Dewāngiri a customs house is maintained by the Bhutān authorities on their side of the frontier. The village is not itself a centre of trade, but about one-third of the traffic of the hills passes through it to the mart at SUBANKHĀTĀ.

Gauhāti Town (*Goa-hathi*=' high land covered with areca-palms').—Head-quarters of Kāmrūp District, Eastern Bengal and Assam, situated in 26° 11′ N. and 91° 45′ E., on both banks of the Brahmaputra river. The principal portion of the town is, however, on the left or southern bank. This lies on the trunk road from Bengal to Sadiyā, and is the terminus of the Assam Valley branch of the Assam-Bengal Railway. A line is under construction along the north bank of the Brahmaputra, which will connect the northern portion with Calcutta by the Eastern Bengal State Railway. An excellent metalled road runs from South Gauhāti to Shillong, the head-quarters of the Province. A steam ferry crosses the Brahmaputra, and the town is a port of call for the river steamers. The total population of North and South Gauhāti together in 1901 was 14,244. The majority of the inhabitants, as in most of the towns of Assam, are foreigners.

Gauhāti is identified with Prāgjyotishapura, the capital of

king Bhagadatta, mentioned in the Mahābhārata. Its subsequent history is uncertain, but in the sixteenth century it was included in the Koch kingdom. In the seventeenth century it was the sport of the armies of the Muhammadans and Ahoms, and in the short space of fifty years was taken and retaken no less than eight times. In 1681 the Muhammadans were driven out of Kāmrūp, and from that time onward Gauhāti became the residence of the Ahom governor of Lower Assam. In 1786, when Rangpur was captured by the Moamarias, the Ahom Rājā transferred his capital to Gauhāti. The extensive earthworks which protect it on the land side, the numerous large tanks, and the brick and masonry remains which are found in every direction beneath the soil, all clearly show that the place was originally an important city, with a considerable population, which occupied both banks of the Brahmaputra. The portion which lies on the north of the river is said to have been built by Parikshit, a Koch king who flourished at the end of the sixteenth century, and was the ancestor of the present Bijni family. By the end of the eighteenth century Gauhāti had, however, fallen from its high estate, and Buchanan Hamilton, writing in 1809, describes it as a 'very poor place.' From 1826, when Assam was ceded to the British, till 1874, when the Province was separated from Bengal, Gauhāti was the head-quarters of the Assam Division; and it is still the head-quarters of the Commissioner and the Judge of the Assam Valley Districts, as well as of the ordinary District staff. The most noteworthy event in its recent history was the earthquake of 1897, which destroyed all the Government offices and wrecked every masonry building in the place. The town has since been rebuilt, and hardly any traces are now to be seen of this great catastrophe.

The situation of Gauhāti is extremely picturesque. To the south it is surrounded by a semicircle of wooded hills, while in front rolls the mighty Brahmaputra, which during the rains is nearly a mile across. In the centre of the stream lies a rocky island, the farther bank is fringed with graceful palms, and the view to the north is again shut in by ranges of low hills. Such a site, though beautiful, is far from healthy, and at one time the mortality in the town was very high. Improvements in the drainage and water-supply have done much to remedy this defect, but owing to its sheltered situation and the comparatively low rainfall (67 inches) the climate in the summer is rather oppressive. In addition to the ordinary public buildings, there are a town hall, a hospital with 29 beds,

and a jail with accommodation for 352 prisoners. The convicts are chiefly employed in gardening, oil-pressing, and weaving. Branches of the American Baptist Mission and of a Roman Catholic mission are located in the town, while the numerous temples situated in Gauhāti itself and in its immediate vicinity render it an object of pilgrimage to Hindus from all parts of India.

Gauhāti was constituted a municipality, under (Bengal) Act V of 1876, in 1878, and (Bengal) Act III of 1844 was subsequently introduced in 1887. The municipal receipts and expenditure during the ten years ending 1902–3 averaged Rs. 43,000. In 1903–4 the income was Rs. 49,000, including taxes on houses and lands (Rs. 8,900), water rate (Rs. 10,000), revenue from markets and slaughterhouses (Rs. 5,400), and a contribution from Provincial revenues (Rs. 10,000). The expenditure was Rs. 51,000, the chief items being water-supply (Rs. 10,600), conservancy (Rs. 16,800), and public works (Rs. 11,200). The water-supply is pumped from the Brahmaputra, passed through filtering beds, and distributed by standpipes all over the town. Since the completion of these works in 1887, cholera, which used to be very prevalent, has almost disappeared. The town is the principal centre of trade in Lower Assam. The exports to Calcutta consist of mustard seed, cotton, silk, cloth, lac, and other forest produce; the principal imports are salt, cotton piece-goods and thread, grain and pulse, and kerosene and other oils. Nearly the whole of the business is in the hands of Mārwāri merchants, who have recently made some attempt to work up raw material obtained from the Assamese instead of exporting it in that condition to Calcutta. Two steam mills have been started for cotton-ginning, flour-grinding, and the manufacture of mustard oil. The larger mill has a daily out-turn of about 1,200 gallons of oil. The chief educational institutions are a second-grade Government college—the Cotton College—which teaches up to the First Arts standard, and two high schools. The Government school was opened in 1835 and the college in 1901. In 1903–4 the college had an average attendance of 64 students.

Hājo.—Village in Kāmrūp District, Eastern Bengal and Assam, situated in 26° 15′ N. and 91° 31′ E., on the north bank of the Brahmaputra, 15 miles by road from Gauhāti. Population (1901), 3,803. Hājo is famous for a temple to Siva which stands in a picturesque situation on the top of a low hill. It is said to have been originally built by one Ubo

Rishi, and to have been restored by Raghu Deb (A. D. 1583) after it had been damaged by the Muhammadan general Kālā Pāhār. It is an object of veneration not only to Hindus but also to Buddhists, who visit it in considerable numbers, under the idea that it was at one time the residence of Buddha. The building has some claims to architectural beauty, but was damaged by the earthquake of 1897. A staff of dancing-girls is attached to the temple, and it enjoys a grant of revenue-free land of over 12,000 acres. The *tahsīl* office and police station are situated about a mile from the village, in front of a large and shallow lake which was formed after the earthquake of 1897.

Kāmākhya.—A temple, sacred to Satī, which stands on the beautiful Nilāchal hill overhanging the Brahmaputra, about 2 miles west of Gauhāti, in Kāmrūp District, Eastern Bengal and Assam, in 26° 10′ N. and 91° 45′ E. According to tradition, the temple was originally built by Naraka, a prince who is said to have flourished at the time of the Mahābhārata, and to have constructed a stone-paved causeway up the hill, which is still in existence. It was rebuilt by Nar Nārāyan about 1565, and on the occasion of its consecration 140 human heads were offered to the goddess, but only a small portion of Nar Nārāyan's temple now remains. Satī's organs of generation are said to have fallen on the place now covered by the temple, and this fact renders the spot an object of pilgrimage to devout Hindus from every part of India. Six other temples stand on the hill, and from the summit a magnificent view is obtained over the river and the surrounding country. A grant of revenue-free land, nearly 8,000 acres in extent, made to the temple by the native rulers of Assam, has been confirmed by the British Government. The most important festivals are the Pous Bia, about Christmas time, when Kāmākhya is married to Kāmeswar, and the Basanti and Durgā *pūjās*, which are celebrated, the former in the spring, the latter in the autumn.

Nalbāri.—Village in the Gauhāti subdivision of Kāmrūp District, Eastern Bengal and Assam, situated in 26° 27′ N. and 91° 26′ E. Population (1901), 1,312. The village contains a market in which country produce of all sorts is procurable. The public buildings include a dispensary and an English middle school. Nalbāri suffered severely from the earthquake of 1897, which altered the waterways and rendered it impossible for boats to come up the Chaulkhoā from Barpetā in the rains—a route that was formerly open. Efforts are

now being made to bring one of the rivers back into its former channel. Most of the trade is in the hands of Mārwāri merchants known as Kayahs. The principal imports are cotton piece-goods, grain and pulse, kerosene and other oils, salt, and bell-metal; the chief exports are rice, mustard-seed, jute, hides, and silk cloths.

Palāsbāri.—Village in the Gauhāti subdivision of Kāmrūp District, Eastern Bengal and Assam, situated in 26° 8′ N. and 91° 32′ E., on the south bank of the Brahmaputra, 15 miles west of Gauhāti town. The Mārwāri merchants of the place purchase lac and a little cotton from the hill tribes, and mustard-seed, rice, silk, and a little jute from the villagers of the neighbourhood. There is a flourishing market, in which all sorts of country produce, especially poultry and vegetables, are procurable. The public buildings include a dispensary and an English middle school. The river steamers call regularly at Palāsbāri *ghāt*.

Rangiā.—Village in the Gauhāti subdivision of Kāmrūp District, Eastern Bengal and Assam, situated in 26° 27′ N. and 91° 37′ E., on the bank of the Baraliā river, 23 miles north of Gauhāti town. The public buildings include a dispensary. Most of the trade is in the hands of Mārwāri merchants known as Kayahs. The principal imports are cotton piece-goods, grain and pulse, kerosene and other oils, and salt; the chief exports are rice and silk cloth. All sorts of country produce are procurable in the village market.

Soālkuchi.—Village in the Gauhāti subdivision of Kāmrūp District, Eastern Bengal and Assam, situated in 26° 11′ N. and 91° 37′ E., on the north bank of the Brahmaputra, about 15 miles west of Gauhāti town. It is a port of call for the river steamers and an important trading centre, the principal articles of export being silk cloths, jute, and mustard-seed. Unlike most of the Assamese, the people of Soālkuchi have a keen commercial instinct, and act as middlemen and carriers in the mustard-seed trade. The principal commercial castes are the Shau or Shāhā, the Dhobi, and the Tānti. The local products include boats and *mūgā* silk.

Subankhātā.—Village in the Gauhāti subdivision of Kāmrūp District, Eastern Bengal and Assam, situated in 26° 47′ N. and 91° 25′ E. A fair is held here in the cold season, which is largely attended by the Bhotiās, who bring down ponies, blankets, wax, and lac for sale, and purchase cotton cloth and other articles. A detachment of military

police, consisting of 31 officers and men, is stationed at Subankhātā during the cold season.

Boundaries, configuration, and hill and river systems.

Darrang.—District of Eastern Bengal and Assam, lying between 26° 12′ and 27° 0′ N. and 91° 42′ and 93° 47′ E., with an area of 3,418 square miles. It is bounded on the north by Bhutān, Towang, a province subject to Tibet, and the Akā and Daflā Hills; on the east by Lakhimpur District; on the west by Kāmrūp; and on the south by the Brahmaputra. Darrang consists of a narrow strip of land shut in between the lower ranges of the Himālayas and the Brahmaputra, about 126 miles in length from east to west, with an average width of 27 miles. The only hills within the District are a few low *tīlas* between 100 and 200 feet in height along the river's edge near Singrāmāri and Tezpur, and an outlying spur of the Himālayas north of Bālipāra, round which the Bhareli sweeps in a broad curve before turning south to join the Brahmaputra. The rest of Darrang is a level plain, through which numerous rivers make their way to the Brahmaputra. The central portion of this plain is well adapted for rice cultivation, but towards the north the level rises, and the foot of the hills is clothed in forest, while in many places the banks of the Brahmaputra are covered with high grass jungle. The District, as a whole, is very sparsely peopled; and though in places there are considerable stretches of cultivated land, a large area is waste, covered with high grass, reeds, and tree forest, and in the north with short springy turf. The general appearance is extremely picturesque. On the north the Himālayas rise like a wall from the valley, and in the cold season snowy peaks are to be seen behind the blue ranges of the outer hills. Along the southern boundary flows the mighty Brahmaputra, and across the river hills again meet the eye. The rivers issue from the mountains through gorges of great beauty; and the even level of the plain is pleasingly diversified with green rice-fields, dotted with groves of fruit trees and clumps of bamboos, trim tea gardens, and stretches of grass jungle or tree forest. The most important tributaries of the Brahmaputra from west to east are the BARNADĪ, with its tributary the Nanai, the Nanadi, the DHANSIRI, the Pāchnai, the Belsiri, the BHARELI, the Bargāng, and the Burai. All of these rivers rise beyond the frontier, and have tortuous courses and swift currents. Near the banks of the Brahmaputra there are numerous swamps and marshes, but no lakes of any size.

Geology.

The plain is of alluvial origin, and consists of an admixture

of clay and sand, the latter preponderating near the Brahmaputra. At Bishnāth and near Tezpur are elevated tracts which represent an older alluvium of heavier texture and higher colour. The hills are for the most part composed of gneiss.

When not under cultivation, the low-lying tracts are covered with a dense jungle of high grass and reeds, of which there are three main varieties, *khagarī* (*Saccharum spontaneum*), *ikra* (*Saccharum arundinaceum*), and *nal* (*Phragmites Roxburghii*). On higher ground thatching-grass (*Imperata arundinacea*) is found. Botany.

The wild animals include elephants, rhinoceros, tigers, leopards, bears, buffaloes, bison, and several kinds of deer; but the larger forms of game are being gradually killed out. In 1904, 16 persons and 3,899 cattle were killed by wild beasts, and rewards were paid for the destruction of 115 tigers and leopards. In 1902-3, 46 elephants were captured. The game-birds include florican, partridges, pheasant, jungle-fowl, and snipe. Fauna.

The climate does not differ materially from that of the rest of the Assam Valley. Between November and the middle of March it is cool and pleasant, but during the remainder of the year it is warm and damp. The thermometer seldom rises above 90°, but in the hot season the air is overcharged with moisture and is thus oppressive. The plains at the foot of the hills are exceedingly malarious, and the District as a whole is not as healthy as those of Upper Assam. Climate.

The rainfall, as in other parts of the Province, is heavy. Near the Brahmaputra about 70 inches are recorded in the year, but under the hills the average fall is about 100 inches. The distribution as a rule is satisfactory, and the District suffers little from either drought or flood. Rainfall.

The great earthquake of 1897 was distinctly felt in Darrang. The eastern wall of the church and the northern wall of the jail at Tezpur were shaken down, and in Mangaldai the sub-divisional officer's house was wrecked, and much damage done to roads and bridges. Earthquake.

According to tradition Darrang originally formed part of the kingdom of Bāna Rājā, who was defeated by Krishna in a pitched battle near TEZPUR ('the town of blood'). His fortress is said to have occupied the site where the Deputy-Commissioner's office now stands; and the massive granite ruins found in the neighbourhood are evidence that the town must at one time have been the seat of powerful and civilized princes, who were probably a line of Pāl kings flourishing History.

about A.D. 1000. At Bhālukpāng, in the gorge of the Bhareli, 30 miles north of Tezpur, are the ruins of a fort, which is said to have been the capital of Bāna's grandson, Bhāluka, from whom the Akās trace their descent. In historical times Darrang formed part of the territory of Nar Nārāyan, the Koch king of Kāmarūpa, a powerful prince who flourished in the latter half of the sixteenth century. Before his death he divided his kingdom and made over Darrang, with Kāmrūp and Goālpāra, to his nephew Raghu Rai, whose capital was at Barnagar in the west of Kāmrūp District. During the reigns of Raghu Rai's two sons, Parīkshit and Bali Nārāyan, the kingdom was invaded by the Muhammadans; and though Bali Nārāyan invoked the aid of the Ahoms from Upper Assam, and was by them established as Rājā of part of Darrang District, he was eventually defeated and killed in 1637. For at least a hundred years earlier the Ahoms had been in possession of the country east of the Bhareli, and from this time onward they were the dominant power in the whole of the District. It is doubtful whether the Koch princes ever exercised sovereign rights over the part of Darrang that lies east of Tezpur; and after the death of Bali Nārāyan the Darrang Rājās sank into the position of feudatory chiefs. Their power steadily declined, and by 1725 their territory consisted only of that portion of the Mangaldai subdivision which lay south of the Gohain Kamala Alī. Sixty years later the Ahom kingdom was tottering to its fall, and the Darrang Rājā endeavoured to throw off its yoke and to seize part of Kāmrūp; but in 1792 he was defeated by an expeditionary force under the command of Captain Welsh, and in 1826 Darrang, with the rest of Assam, passed under British control. As the hold of the Ahoms weakened, the Bhotiās, Akās, and Daflās took the opportunity of establishing some claim to the territory lying at the foot of the Himālayas. Under native rule the two Duārs of Kaling and Buriguma, in the west of Darrang, were leased to the Bhotiās for eight months in the year. This arrangement was the source of constant trouble; and in 1841 Government attached the whole of this territory, compensating the Bhotiās for their claims with an annual money payment. Similar arrangements were made with the Bhotiās not subject to Bhutān, who put forward claims to the Kariāpāra Duār and the Char Duār; but more trouble was experienced with the Akās and Daflās who occupy the hills east of the river Dhansiri. Leaving aside the raids of frontier tribes, the most noticeable event that has occurred of recent years was a riot

at Pātharughāt in February, 1894. The villagers attempted to resist the revision of the land revenue assessment, and assembled in large numbers to coerce the Deputy-Commissioner. The police were compelled to fire in self-defence, and 15 of the rioters were killed and 37 wounded.

Archaeology.

Apart from the carved stones and pillars found at Tezpur and the ruins of a large stone temple on a neighbouring hill, the District contains few objects of archaeological interest. Near Bishnāth, however, remains of extensive earthworks are seen, which must once have enclosed a considerable town; and large tanks are to be found near the roads made by the native princes.

The people.

The population of the District at the last four enumerations was: (1872) 235,720, (1881) 273,012, (1891) 307,440, and (1901) 337,313. The whole of the increase since 1881 has been due to immigration, for the number of persons born and enumerated in the District in 1901 was nearly 6 per cent. less than it had been twenty years before. Darrang is divided into two subdivisions, TEZPUR and MANGALDAI, with head-quarters at the towns of the same names. The Tezpur subdivision is sparsely peopled, healthy, and progressive, and contains a large number of tea gardens. Mangaldai, on the other hand, had a fairly dense population twenty years ago, which has steadily declined since 1891, owing to excessive mortality from *kalā azār*. In 1901 the District contained one town, TEZPUR, the head-quarters; and 1,275 villages.

The following table gives statistics of population according to the Census of 1901:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Mangaldai . .	1,245	...	783	170,580	137	− 9·2	3,119
Tezpur . .	2,173	1	492	166,733	77	+ 39·5	6,432
District total	3,418	1	1,275	337,313	99	+ 9·7	9,551

About 71 per cent. of the population in 1901 were Hindus, 23 per cent. animistic tribesmen, and 5 per cent. Muhammadans. The foreign element in the population is very large, and no less than one-fourth of the persons enumerated in Darrang in 1901 had been born in other Provinces. The majority of these persons are garden coolies, many of whom settle down as cultivators on the expiry of their agreements, and now form

an important element in the village population of the Tezpur subdivision. Assamese was in consequence spoken by only 51 per cent. of the population, and Bodo by 16 per cent., while Bengali was returned by 19 per cent., and 6 per cent. used Hindī or Mundārī.

Castes and occupations.

Among Hindus the caste most strongly represented is the Koch (47,400), whose ranks are largely recruited from converted Kachāris. The higher castes include Brāhmans (6,400), Ganaks (6,200), Kalitās (17,800), and Kewats (13,600). There are many foreign cooly castes, the most numerous being Mundās (14,100) and Santāls (11,200). The principal aboriginal tribes are the Kachāris (63,200), with their kinsmen the Rabhās (15,400). Members of European and allied races numbered 203 in 1901. Agriculture was the means of support of 92 per cent. of the population, a very high proportion even for Assam.

Christian missions.

A clergyman belonging to the Church Missionary Society has for many years been labouring among the Kachāris in the north of the District, and most of the native Christians (1,128) are members of the Anglican communion.

General agricultural conditions.

The soil varies from sand to a stiff clay, but for the cultivation of rice the rainfall and level of the land are more important factors than the actual composition of the soil on which it is grown. Summer rice and mustard are raised on the *chaparis* near the Brahmaputra in Mangaldai; but in the neighbourhood of Tezpur and Bishnāth the fringe of permanent cultivation reaches to the river, and the proportion of land under these two crops is small. The central part of Mangaldai and the strip of land between the Gābharu and the Bhareli, north of Tezpur, are for the most part covered with winter rice, which is also grown largely in the submontane tracts in the north-west. Most of the tea gardens are situated on the broad ridge known as the 'high bank,' which runs north from Tezpur towards the foot of the hills.

Chief agricultural statistics and principal crops.

The main agricultural statistics of the District in 1903–4 are shown in the following table, in square miles:—

Subdivision.	Area shown in the revenue accounts.			Forests.
	Settled.	Unsettled.	Cultivated.	
Mangaldai . . .	339	906	232	27
Tezpur . . .	336	1,837	227	294
Total	675	2,743	459	321

Rice is the staple crop, covering 331 square miles, or 68 per cent. of the total cropped area. The total value of the rice crop is, however, considerably less than that of the tea manufactured in the District. Nearly four-fifths of the rice land is usually under *sāli* or transplanted winter rice; and nearly the whole of the remainder is *āhu* or summer rice, which is either sown broadcast on the *chaparis* or grown as a transplanted crop in high irrigated land under the Himālayas.

Tea.

The tea industry has made great strides during the last twenty years, and has been one of the most important factors in the development of the District. In 1882 the area planted was only 14,300 acres, but by 1896 it had risen to 31,900 acres. The industry was at that time in a very prosperous condition, private owners took advantage of the opportunity to sell their property to companies, and the capital thus obtained was used to extend the area under cultivation, which three years later amounted to 41,500 acres. It was impossible for the demand to keep pace with so rapid an expansion of the supply; prices fell, it was no longer found profitable to spend money and labour on old tea gardens, and by 1904 the area had fallen to 39,941 acres. There were in that year 87 gardens, yielding an out-turn of nearly 16,000,000 lb. of manufactured tea and giving employment to 99 Europeans and 52,085 natives, nearly all of whom had been brought at a great expense from other parts of India. The principal companies are the Empire of India Company, with its centre at Barjuli, and the Bishnāth Company, with its centre at Pratāpgarh.

Improvements in agricultural practice.

Between 1891 and 1901 the area settled at full rates rose by 7 per cent., but the whole of this increase occurred in the Tezpur subdivision, and the decrease of population in Mangaldai was accompanied by a shrinkage in the cultivated area. Some attempt has been made at scientific farming by Europeans and Bengalis, and cotton, jute, and various kinds of sugar-cane and rice have been introduced; but the natives as a whole show little inclination to adopt new varieties or to improve the quality of the crops grown. No advances under the Agriculturists' Loans Act have yet been made in the District.

Cattle.

In spite of an abundance of good grazing, the Assamese cattle, as in other parts of the Brahmaputra Valley, are miserable creatures; but the native breed of buffaloes are fine specimens of their kind. The Bhotiās bring down sturdy little ponies, sheep, and fine cattle. Sheep do not thrive in the

plains, and are hardly ever reared there, while the ponies bred in the District are very inferior.

Irrigation. Irrigation is practised only in submontane tracts, where the Kachāris divert water from the hill streams to their fields through little channels, and thus raise magnificent crops of rice from somewhat inferior soil. In the central portion of the plain the abundant rainfall and the low level of the land render irrigation unnecessary.

Forests. Most of the 'reserved' forests of Darrang lie at the foot of the hills that form the northern boundary, stretching east and west from the Bhareli river at the point where it debouches on the plains. The total area of the Reserves, of which there are 7, is 321 square miles, the largest being the Charduār (121 square miles), the Bālipāra (88 square miles), and the Nowduār (82 square miles). The most valuable trees are rubber (*Ficus elastica*), which has, however, been largely killed out by over-tapping, *sāl* (*Shorea robusta*), *nahor* (*Mesua ferrea*), *khair* (*Acacia Catechu*), *gunserai* (*Cinnamomum glanduliferum*), and *sam* (*Artocarpus Chaplasha*). Canoes are made from the *hollock* (*Terminalia bicolorata*), and *simul* (*Bombax malabaricum*) is used for tea boxes. The needs of the people are fully met from the 'unclassed' state forest, managed by the local revenue authorities, which in 1903-4 covered an area of 2,126 square miles; very little timber is extracted from the Reserves. The greater portion of the 'unclassed' state forest is, however, rolling savannah or marsh land, almost entirely destitute of tree growth. A considerable trade has always been carried on in rubber, which was formerly obtained in large quantities in British territory, but now comes chiefly from across the frontier. The receipts on this account during the ten years ending 1900-1 averaged Rs. 21,000 per annum. In 1873 a plantation of rubber trees was started by Government at CHARDUĀR, which in 1903-4 covered 2,900 acres. A small trade has recently sprung up in *agar* wood, which is used for the manufacture of a perfume much in favour throughout the East.

Minerals. No minerals are worked in Darrang, but good building stone can be obtained from the hills near Tezpur town. Under native rule gold-washing was carried on in many of the rivers, but the industry has completely died out since the occupation of the country by the British. Limestone of an inferior quality is found in the west of the District, and travertine, containing as much as 90 per cent of lime, has been discovered just beyond the frontier. Coal is known to exist outside the

northern boundary, but not, it is believed, in valuable quantities or of good quality.

The manufactures of Darrang are of very little importance. A few persons cast or hammer bell-metal and brass vessels; simple ornaments of gold, silver, and lacquer are made, but only to order; and a certain amount of rough pottery is turned out; but the number of persons supported by these crafts is small. Weaving is carried on in almost every house, but the greater part of the produce is required for home consumption, and the surplus available for sale is not large. A saw-mill afforded employment in 1904 to one European and 55 natives. Arts and manufactures.

As in the rest of the Assam Valley, almost the whole of the trade is in the hands of the wealthy and indefatigable Mārwāri merchants, whose shops are to be found even in the remotest portions of the District; but at Mangaldai and Tezpur a few shops are kept by Muhammadans from Bengal. A great deal of business is also done at the markets which are held every week in the neighbourhood of the tea gardens, and attended by villagers from many miles round. The principal centres are TEZPUR, Bindukuri, BĀLIPĀRA, and Barjuli, all of which are served by the Tezpur-Bālipāra Railway. East of the Bhareli there is a fairly large market at Chutiā, and in Mangaldai the largest bazars are those at Mangaldai town, Paneri, and Kalaigaon. External trade is carried on almost entirely with Calcutta, and enters and leaves the District by steamer. The principal exports are tea, rubber, mustard-seed, hides, and canes, while the articles received in exchange are rice, gram and other grains, kerosene and other oils, piece-goods, machinery, hardware, and salt. Trans-frontier trade, which is largely transacted by barter, is carried on with the Bhotiās of Bhutān at Ghāgrāpāra and with those of Towang at UDALGURI. Rubber is also imported from the Akā and Daflā Hills. The principal imports are rubber, blankets, and hill ponies; the chief exports, cotton twist and piece-goods, rice, and silk cloths. Salt used formerly to be imported across the frontier in considerable quantities, but has of late years been ousted by the cheaper and better article obtained from Bengal. Commerce.

The main channel of trade is the Brahmaputra, on which a daily service of passenger boats and a large fleet of cargo steamers, owned by the India General Steam Navigation Company and the Rivers Steam Navigation Company, ply between Goalundo and Dibrugarh and call at Tezpur and five other places in Darrang District. Country boats do not often pass up the Brahmaputra much above Mangaldai, and the rivers Means of communication.

flowing from the Himālayas are little used as trade routes. The trunk road runs from west to east through the District, a distance of 144 miles, but carries traffic only in a few places, as the direction of trade is southwards to the great river. There is no dearth of roads, but heavy traffic from the tea gardens renders some of those leading to the river *ghāts* almost impassable in the rains. The cost of metalling is prohibitive, and the inconvenience experienced near Tezpur was so great that a 2 feet 6 inches railway was constructed in 1895 with private capital. This line runs from Tezpur *ghāt* through some of the most important gardens, for a distance of twenty miles, to Bālipāra. In 1903-4, 165 miles of unmetalled roads were maintained by the Public Works department and 420 miles of unmetalled roads by local boards. Most of the minor streams are bridged, but ferries have still to be worked over the larger rivers.

District subdivisions and staff.

For general administrative purposes the District is divided into two subdivisions—TEZPUR, which is under the immediate charge of the Deputy-Commissioner; and MANGALDAI, which is usually entrusted to a European magistrate. In addition to the Deputy-Commissioner, the ordinary staff of the District includes three Assistant Magistrates, one of whom is in charge of the Mangaldai subdivision, an Engineer, who is also in charge of Nowgong District, and a Forest officer.

Civil and criminal justice.

The Deputy-Commissioner exercises the powers of a Sub-Judge and the Assistant Magistrates act as Munsifs. Appeals, both civil and criminal, lie to the Judge of the Assam Valley, but the chief appellate authority is the High Court at Calcutta. The people are, as a whole, law-abiding, and there is not much serious crime.

Land revenue.

The land revenue system does not differ materially from that in force in the rest of Assam proper, which is described in the article on ASSAM. The settlement is *ryotwāri*, being made direct with the actual cultivators of the soil, and is liable to periodical revision. The District contains a large area of waste land, much of which is fit for permanent cultivation; but the settled area in 1903-4 was only one-fifth of the total area, including rivers, swamps, and hills. Mustard and summer rice are seldom grown on the same land for more than three years in succession, and the villagers are allowed to resign their holdings and take up new plots of land on giving notice to the revenue authorities. In 1903-4, 17,000 acres of land were so resigned and more than 26,000 acres of new land taken up. Fresh leases are issued every year for this shifting cultivation,

and a large staff of *mandals* is maintained to measure new land, test applications for relinquishment, and keep the records up to date. The District was last resettled for ten years in 1893, and the average assessment per settled acre assessed at full rates in 1903-4 was Rs. 2-8-3 (maximum Rs. 4-2 and minimum Rs. 1-11). Of recent years the condition of the people in Mangaldai has been prejudicially affected by the heavy mortality due to *kalā azār*, and by the great earthquake which disturbed the level of the country. In 1901, as a measure of relief, the land revenue demand in that subdivision was reduced by Rs. 20,000.

The land revenue and total revenue of the District are shown in the following table, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Revenue from land	4,37	4,85	7,01	6,96
Total revenue	9,31*	10,11	13,48	12,92

* Exclusive of forest receipts.

Local and municipal government.

Outside the municipality of TEZPUR, the local affairs of each subdivision are managed by a board presided over by the Deputy-Commissioner and subdivisional officer respectively. The presence of a strong European element on these boards, elected by the planting community, lends to them a considerable degree of vitality. The total expenditure in 1903-4 amounted to Rs. 1,03,000, nearly two-thirds of which was laid out on public works. The income is chiefly derived from local rates, supplemented by a substantial grant from Provincial revenues.

Police and jails.

For the prevention and detection of crime, the District is divided into eight investigating centres, and the civil police force consisted in 1904 of 32 officers and 201 men. There are no rural police, their duties being discharged by the village headmen. During the winter 3 officers and 126 non-commissioned officers and men of the Lakhimpur military police battalion are stationed in Darrang, to hold the four outposts of UDALGURI, Ghāgrāpāra, Daimārā, and Dikal, with a reserve at Tezpur. In the rains, when the hillmen cannot easily reach the plains, the outposts are withdrawn, and only the Tezpur garrison of 34 rifles remains. In addition to the District jail at Tezpur, there is a subsidiary jail at Mangaldai, with accommodation for 35 male and 4 female prisoners.

Education.

Education has not made much progress in Darrang. Be-

tween 1874–5 and 1903–4 the number of scholars increased by 103 per cent., as compared with 223 per cent. in all the plains Districts of Assam taken together. The number of pupils under instruction in 1880–1, 1890–1, and 1903–4 were 3,165, 3,593, 4,763, and 4,550 respectively. At the Census of 1901, 2·8 per cent. of the population (5·2 males and 0·3 females) were returned as literate. This low rate is partly due to the fact that animistic tribes and garden coolies form an unusually large proportion of the total population. There were 139 primary, 5 secondary, and 2 special schools in the District in 1903–4. The number of female scholars was 145. A large majority of the pupils under instruction were only in primary classes, and not a single girl had advanced beyond that stage. Of the male population of school-going age, 14 per cent. were in the primary stage of instruction, and of the female population of the same age less than one per cent. The total expenditure on education in 1903–4 was Rs. 47,000, of which Rs. 7,000 was derived from fees; 31 per cent. of the direct expenditure was devoted to primary schools.

Medical. The District possesses 2 hospitals and 8 dispensaries, with accommodation for 52 in-patients. In 1904 the number of cases treated was 107,000, of whom 400 were in-patients, and 1,000 operations were performed. The expenditure in the same year was Rs. 15,000, the greater part of which was met from Local and municipal funds.

Vaccination. The advantages of vaccination are not fully appreciated; and in 1903–4 only 35 per 1,000 of the population were successfully vaccinated, which is considerably below the proportion for the Province as a whole.

[E. A. Gait, 'The Koch Kings of Kāmarūpa,' *Journal of the Asiatic Society of Bengal*, vol. lxii, p. 4; Sir W. W. Hunter, *A Statistical Account of Assam*, vol. i (1879); A. Mackenzie, *History of the Relations of the Government with the Hill Tribes of the North-East Frontier of Bengal* (Calcutta, 1884); B. C. Allen, *District Gazetteer of Darrang* (1906).]

Mangaldai.—Subdivision of Darrang District, Eastern Bengal and Assam, lying between 26° 12′ and 26° 56′ N. and 91° 42′ and 92° 27′ E., with an area of 1,245 square miles. It consists of a compact block of land lying between the Brahmaputra and the Himālayas. Between 1891 and 1901 the population fell from 187,950 to 170,580, while in the previous decade there had been hardly any increase. This lack of progress is chiefly due to *kalā azār*, the malarial fever which has wrought such havoc in Lower and Central Assam.

The marshes that fringe the Brahmaputra are fit only for the cultivation of mustard and summer rice, but the central portion of Mangaldai is closely populated, and the subdivision supports 137 persons per square mile, as compared with 77 in the neighbouring subdivision of Tezpur. In 1904 there were in Mangaldai 26 tea gardens with 10,940 acres under plant, which gave employment to 28 Europeans and 13,271 natives; but the tea plant does not thrive as well here as in Upper Assam. In the central portion the annual rainfall averages between 60 and 70 inches, while it is as much as 100 inches under the hills. The submontane tracts are chiefly inhabited by the Kachāri tribe, who irrigate their rice-fields with water drawn from the hill streams; but artificial irrigation is not required in the central portion of the subdivision. The subdivision contains 783 villages, including Mangaldai, the head-quarters. The demand for land revenue and cesses in 1903–4 was Rs. 4,01,000.

Tezpur Subdivision.—Subdivision of Darrang District, Eastern Bengal and Assam, lying between 26° 31′ and 27° 0′ N. and 92° 19′ and 93° 47′ E., with an area of 2,173 square miles. The subdivision consists of a narrow strip of land between the Brahmaputra and the Himālayas, a large portion of which is still uncultivated, the density in 1901 amounting to only 77 persons per square mile. The total population recorded at that Census was 166,733, or nearly 40 per cent. more than the figure for 1891 (119,490). This rapid increase is chiefly due to the tea industry, and more than a third of the population live on the plantations. The country a little to the north of Tezpur town is particularly suitable for the growth of tea; and in 1904 there were 61 gardens with 29,001 acres under plant, which gave employment to 71 Europeans and 38,814 natives. On the expiry of their agreements, many of the coolies settle down to cultivation in the villages, and the subdivision has to a great extent been colonized by this means. The foot of the hills is clothed with evergreen forest, nearly 300 square miles of which have been declared Government Reserves; but the trade in timber is at present inconsiderable. The annual rainfall at Tezpur town averages 73 inches, while nearer the hills it is between 90 and 100 inches. The subdivision contains one town, TEZPUR (population, 5,047), the head-quarters of the District and subdivision; and 492 villages. The demand for land revenue and cesses in 1903–4 amounted to Rs. 3,81,000. Tezpur differs materially from Mangaldai, the other subdivision of

Darrang; for the last twenty years it has been healthy and progressive, while Mangaldai has steadily receded.

Bālipāra.—Village in Darrang District, Eastern Bengal and Assam, situated in 26° 50′ N. and 92° 44′ E., about 20 miles north of Tezpur town. Bālipāra is the terminus of a light railway, which runs from this point to the river *ghāt* at Tezpur. A large market is held every Sunday, which is attended by great numbers of coolies from the tea gardens in the neighbourhood. Prior to the construction of the railway, an outpost of military police was stationed at Bālipāra to keep the Akās in check. In 1835 this outpost was rushed and 17 persons killed by the hillmen. In 1883 the Akās again gave trouble and carried off two native forest officers from the Bālipāra range office.

Charduār.—Forest Reserve in Darrang District, Eastern Bengal and Assam, situated in 26° 55′ N. and 92° 45′ E., at the foot of the Akā Hills. The Reserve has an area of 121 square miles, and is best known as including an artificial plantation of the rubber tree (*Ficus elastica*), which in 1903-4 covered 2,872 acres. The plantation was first started in 1873 and cost more than 2 lakhs up to 1904. Tapping was first begun on a considerable scale in 1899, and the receipts under this head in 1903-4 amounted to Rs. 15,700.

Tezpur Town.—Head-quarters of Darrang District, Eastern Bengal and Assam, situated in 26° 37′ N. and 92° 47′ E., on the right bank of the Brahmaputra. The town is small, but is steadily growing in size. Population (1901), 5,047. Communications with the outside world are maintained chiefly by the river steamers which ply between Calcutta and Dibrugarh; but the north trunk road passes through the town, and a light railway runs from Tezpur *ghāt* to Bālipāra, about 20 miles north. Tezpur is said to have been the capital of a mythical Hindu prince, Bāna Rājā, who engaged in a sanguinary conflict with Krishna. His palace is popularly believed to have stood on a site now occupied by the Deputy-Commissioner's office, and numerous carved stones and pillars are found lying about the town. A little to the west are the ruins of a large stone temple which was evidently erected many centuries ago. The material employed was granite, and some of the shafts, which are 8 feet high and 5½ feet in circumference, were hewn from a single block of stone. In its original condition this temple must have been a fine example of the mason's art; but it has been utterly destroyed, and hardly one stone is left standing upon another. The town has been laid out with great taste

and judgement, and presents a pretty and park-like appearance. The houses of the European residents are built on low hills along the river front, from which on a clear day a magnificent view is to be obtained of the Himālayan snows. The native quarter lies farther away. Tezpur is the head-quarters of the District staff, and, in addition to the usual public buildings, contains a lunatic asylum, a hospital with 40 beds, and a jail with accommodation for 310 prisoners. The convicts are principally employed in weaving, bamboo- and cane-work, oil-pressing, and *surkhi*-pounding. The town was formed into a municipality in 1893. The municipal receipts and expenditure during the nine years ending 1902–3 averaged Rs. 17,000. In 1903–4 the income was Rs. 17,000, chiefly derived from fees from pounds and markets (Rs. 5,100) and a grant from Provincial revenues (Rs. 5,000), while the expenditure of Rs. 16,000 included conservancy (Rs. 5,300) and public works (Rs. 5,000). There are no manufactures of any importance; but the bazar contains the warehouses of several substantial merchants who sell grain, piece-goods, salt, and oil, and buy rubber, mustard-seed, and other country produce. The chief educational institution is a high school, which in 1903–4 had an average attendance of 189 boys. A small detachment of military police is stationed in the town, and 101 members of the Assam Valley Light Horse are resident in the District.

Udalguri.—Village in the Mangaldai subdivision of Darrang District, Eastern Bengal and Assam, situated in 26° 46′ N. and 92° 7′ E., near the foot of the Himālayas. A fair is held here during the cold season, which is attended by the inhabitants of Towang, a province subject to Tibet. The principal articles imported are ponies, sheep, blankets, salt, and yaks' tails. The chief exports are rice, cotton and silk cloths, and brass utensils. The head-quarters of the hillmen are at Amratol, which is picturesquely situated in the gorge of the Dhansiri river, about 6 miles beyond the frontier. A *darbār* is held at Udalguri in the winter, when the Tibetan officials, known as Gelengs, are presented with the *posa* allowed them by the British Government. The effect is very picturesque, as the hillmen are attired in rich costumes of Chinese pattern, and are attended by crowds of quaintly-dressed retainers mounted on shaggy ponies. The fort at Udalguri is garrisoned in the cold season by 46 officers and men of the Lakhimpur military police battalion.

Nowgong District (*Naogaon* = 'new village').—District in Eastern Bengal and Assam, lying between 25° 36′ and **Boundaries, con-**

figuration, and hill and river systems.

26° 42′ N. and 91° 57′ and 93′ 45′ E., with an area of 3,843 square miles. It is bounded on the north by the Brahmaputra; on the east by Sibsāgar; on the south by the Nāgā and North Cāchār Hills; and on the west by the Jaintiā Hills and Kāmrūp. The outlying spurs of the Jaintiā range project into the southern portion of the District, while on the north-east a portion of the MĪKĪR HILLS, a tract of hilly country cut off from the main mass of the Assam Range by the valleys of the Dhansiri and Lāngpher, is included within the District boundaries. The rest of Nowgong is flat, though a few isolated hills crop up above the alluvium in the south and west, and a low range, known as the Kāmākhya hills, runs from the Brahmaputra to the north bank of the Kalang. The hills are, as a rule, rocky, with steeply sloping sides, and are covered with dense tree jungle, except where they have been cleared for shifting cultivation. The principal river is the Brahmaputra, which flows along the northern boundary. A little to the east of Silghāt the KALANG leaves the parent stream, and, after pursuing a tortuous course through the centre of the District, rejoins the Brahmaputra on the border of Kāmrūp. The Diphlu falls into the Brahmaputra east of Silghāt, and the country north of the Kalang is drained by the Sonai. The other rivers fall into the Kalang, the most important being the KAPILI, with its tributaries the Doiāng, Jamunā, Barpāni, and UMIĀM or Kiling. The District is well supplied with streams and rivers, and there are numerous *bīls* or swamps. None of these is of any great importance, and many are merely the old beds of rivers that have altered their channels. Along a great part of its course the banks of the Kalang are fringed with a continuous line of villages, buried in groves of bamboo and the graceful areca palm. Elsewhere the scenery is wild, but not unpleasing. To the south and east blue forest-clad hills shut in the view, while on a clear day the snowy ranges of the Himālayas can be seen north of the Brahmaputra. A considerable portion of Nowgong lies too low for permanent habitation or cultivation. A large tract south of the Brahmaputra is covered with high grass, in which patches are cleared for cold-season crops; and there are great expanses of jungle-covered land in the valley of the Kapili and along the foot of the hills. Nowgong is, in fact, the most sparsely-peopled and jungly District in the whole of the Assam Valley.

The soil of the plain is an alluvium, consisting of a mixture of clay and sand in varying proportions. The northern Mīkīr

Hills are mainly of gneiss, which towards the south is overlain by sedimentary strata of the Tertiary period. These younger rocks consist of soft yellow sandstones, finely laminated grey shales, and nodular earthy limestones.

Where not under cultivation, the plains usually bear high grass or reeds, of which there are three main species—*khagari* (*Saccharum spontaneum*), *ikra* (*Saccharum arundinaceum*), and *nal* (*Phragmites Roxburghii*). Higher land produces *ulu* (*Imperata arundinacea*) and other kinds of shorter grass used for thatching. The hills are covered with evergreen forest, and patches of *sāl* (*Shorea robusta*) are found here and there. Botany.

Wild animals are numerous, including elephants, rhinoceros, tigers, leopards, bears, buffaloes, bison, and several kinds of deer. Elephants, if their numbers are not kept down, cause injury to the crops. In 1904 wild animals were said to have killed 8 men and 1,246 head of cattle. Rewards were paid in that year for the destruction of 38 tigers and leopards. Small game include florican, partridges, pheasants, pea- and jungle-fowl, hares, wild ducks, and snipe. Fauna.

The climate does not differ materially from that of the other Districts in the Assam Valley. Between November and the middle of March it is cool and pleasant, and during the rest of the year warm and damp. The thermometer at the hottest season seldom rises much above 90°, but the air is overcharged with moisture and is therefore oppressive. The District, and more especially the part lying at the foot of the hills, has always been considered unhealthy; and this reputation has been well sustained of recent years. Climate.

Nowgong is to some extent sheltered from the monsoon by the Assam Range, and the annual rainfall over the greater part of the District averages from 70 to 80 inches in the year. The Kapili valley is exceptionally dry, and only receives about 40 inches. Rainfall.

The earthquake of 1897 did much damage in Nowgong town, and injured roads and bridges throughout the District. Earthquake.

Nowgong has no independent history apart from that of the Assam Valley. Jangal, a Hindu king of Kāmarūpa, is said to have made his capital near Rahā in the thirteenth century A.D.; and several places, such as Rahā, Jāgi, and Kajalimukh, take their names from incidents which are supposed to have occurred when this prince was defeated and killed by the Kachāri Rājā. The Kachāris at one time occupied a considerable portion of the District, but in 1536 they were defeated by the Ahoms and their capital at Dimāpur sacked. History.

From this time the Kalang seems to have been their northern boundary, while north of that river the Ahoms were the dominant power. On the break up of the Áhom kingdom, the District was exposed to the ravages of the Burmans, who in 1820 decapitated 50 men on the banks of the Kalang and burned alive 200 persons, young and old, men and women together.

After the British took possession of the country in 1826, Nowgong was at first administered as a portion of Kāmrūp, but in 1832 was formed into an integral revenue unit. The eastern boundary was at that time the Dhansiri, and the District included the Mīkīr Hills and part of the North Cāchār and Nāgā Hills. The Nāgā Hills and a large part of the Mīkīr Hills were formed into a separate District in 1866; but a considerable portion of the Mīkīr Hills was subsequently retransferred to Nowgong, which took its present form in 1898. Under British rule the course of affairs has been uneventful. On one occasion, however, the aboriginal tribes broke out; when the cultivation of poppy was prohibited in 1861 the Lalungs killed the Assistant Commissioner, Lieutenant Singer, who had been sent to disperse a meeting of that tribe at Phulaguri, about 9 miles south of Nowgong town.

Archaeology. The District contains few objects of archaeological interest. There is a Hindu temple at Kāmākhya, near Silghāt, which dates from the middle of the eighteenth century; and ruins of temples and forts have been found in the Kapili valley, which were probably erected in the time of the Kachāri Rājās.

The people. The District contains one town, NOWGONG (population, 4,430), the head-quarters; and 1,117 villages. The population at the last four enumerations was: (1872) 260,238, (1881) 314,893, (1891) 347,307, and (1901) 261,160, the density in the last year being only 68 persons per square mile. The enormous decrease that took place during the last decade, amounting to about 30 per cent. among the indigenous population, and nearly 25 per cent. in the total, was chiefly due to the ravages of *kalā azār*, a very acute and contagious form of malarial poisoning.

About 64 per cent. of the population in 1901 were Hindus, 31 per cent. belonged to animistic tribes, and 5 per cent. were Muhammadans.

The proportion of foreigners (11 per cent.) is comparatively low for Assam. One of the effects of the exceptional unhealthiness in recent years has been to increase the proportion of women, who among the indigenous population now exceed the men in numbers. Assamese is spoken by 66 per cent.

of the people, while 20 per cent. speak Mīkīr and other languages of the Tibeto-Burman family.

Castes and occupations.

The proportion of higher castes is fairly large, including Brāhmans (6,100), Kalitās (16,300), and Kewats (13,300). The Koch, who are largely composed of converts from the aboriginal tribes, number 33,600. The principal lower castes are Nadiyāls or fishermen (18,900) and Jugis (15,000). The Boriās (7,800), a caste peculiar to Assam, are composed of the offspring of Brāhman widows and other alliances contracted outside the pale of customary law. The chief aboriginal tribes are Mīkīrs (35,700), Lalungs (29,000), and Kachāris (11,800), all of whom are members of the great Bodo family, and are believed to have entered Assam from the north-east many centuries ago. Only 93 members of European and allied races were enumerated in the District in 1901. Agriculture is the predominant occupation, being returned by 90 per cent. of the people at the last Census, a proportion which is high even for Assam.

Christian missions.

The American Baptists have for many years had a mission in Nowgong town, and the native Christians (496) are members of that sect.

General agricultural conditions.

The soil of the plains consists of clay and sand mixed in varying proportions, but the character of the harvest depends more upon the rainfall and the level of the fields than upon the quality of soil on which it is grown. The plains are much exposed to injury from flood. A sudden rise of the Kapili or Kalang and their tributaries is liable to destroy the rice crop, and cultivation in the neighbourhood of the Brahmaputra is largely affected by the action of that river. If the waters rise too early, the summer rice suffers; and if they remain late into the autumn, the ground is left too damp and cold for mustard.

Chief agricultural statistics and principal crops.

In 1903-4 the unsettled area was 3,417 square miles, including 142 square miles of 'reserved' forest; and 348 square miles were cultivated, out of a total settled area of 426 square miles. Rice is the staple crop, and in 1903-4 covered 245 square miles, or 61 per cent. of the total cropped area. It is divided into three main classes: *sāli*, or transplanted winter rice, which is grown on land that is low enough to retain moisture, but high enough to be free from risk of flood; *āhu*, or summer rice, which is for the most part sown on the *chaparis* near the Brahmaputra, and to be successful must be cut before the river rises; and *bao*, a long-stemmed variety grown in marshy tracts. Thirty per cent. of the rice

area is usually under *āhu*, 19 per cent. under *bao*, and 51 per cent. under *sāli*, which gives a larger out-turn than the other two classes, but requires a greater expenditure of labour. In 1903-4 mustard and pulse, which are grown in conjunction with *āhu*, covered 47,000 and 15,000 acres respectively. Other crops are tea, sugar-cane, *til*, and cotton, which last is raised by the Mīkīrs in the hills.

Tea. The tea plant was first introduced into Nowgong about 1854; but the soil and climate have not proved as suitable as in Upper Assam, and the industry has suffered from the unhealthiness of the past decade. In 1904 there were 43 gardens with 11,857 acres under plant, which yielded more than $4\frac{1}{2}$ million pounds of manufactured tea and gave employment to 23 Europeans and 12,461 natives, nearly all of whom had been imported from other parts of India. The largest concern is the Sālanā Tea Company, with head-quarters at Sālanā.

Improvements in agricultural practice. The decrease in population was accompanied by a decrease in the area settled at full rates, which shrank by 26 per cent. between 1891 and 1901. Since that date there has, however, been a slight extension of cultivation. Little or no attempt has been made to improve the existing staples by the selection of seed or to introduce new varieties. Agricultural loans were first made in 1902, and since that date a few hundred rupees have been distributed.

Cattle. The farm cattle, as in the rest of Assam, are poor and undeveloped, in spite of the abundance of excellent grazing ground; but the buffaloes of the District are fine animals. There is no indigenous breed of sheep or ponies.

Irrigation and flood protection. Irrigation is practised only in the submontane tracts, where water is occasionally diverted from the hill streams by means of artificial channels. In the plains, the problem for solution is rather the protection of the fields from flood than the introduction of more water. Prior to the earthquake of 1897 there were raised roads along the banks of several of the rivers, which served the purpose of flood embankments. The most important were the road running along the right bank of the Kalang from Kaliābar to Rahā, that along the left bank of the Rupahi, and that along the right banks of the Kapili and Jamunā from Rahā to Dabakā. These dikes were breached or destroyed by the earthquake, and since that date considerable damage has been done by flood.

Forests. There are ten 'reserved' forests in Nowgong, covering an area of 142 square miles. Most of these forests contain *sāl*

(*Shorea robusta*); but the largest trees in the more accessible portions have been worked out, and though there is excellent timber in the Diju, Kukrakātā, and Rangkhang Reserves, the difficulties of transport are considerable. The area of 'unclassed' state forest was 3,436 square miles in 1903-4, but this includes large stretches of land covered with grass and reeds and practically destitute of timber. The most valuable trees are *poma* (*Cedrela Toona*), *gomari* (*Gmelina arborea*), *gunserai* (*Cinnamomum glanduliferum*), *sam* (*Artocarpus Chaplasha*), from which canoes or dug-outs are hollowed out, and *sāl* and *sonaru* (*Cassia Fistula*), which are used for posts. The amount of timber exported from the District is small; and though cane is plentiful, there is very little trade in this product. Rubber is extracted in small quantities.

Minerals. No minerals are worked; but iron ore is found in the Mīkīr Hills, and limestone in the beds of the Deopāni, Hariājān, and Jamunā rivers. Coal has also been found on Langlei hill, about 12 miles from Lumding.

Arts and manufactures. Apart from tea, the manufactures of Nowgong are of small importance, being usually practised as home industries, subsidiary to the main occupation, which is agriculture. They include the weaving of silk and cotton cloth, rough jeweller's work, basket- and mat-making, and the manufacture of coarse pottery and of various utensils from brass, bell-metal, and iron. A speciality of the District is the *jhapi*, or broad-brimmed hat, which is made of leaves and artistically ornamented with coloured cloth.

Commerce. The lac insect is reared by the hill tribes, and lac is exported in considerable quantities. Wholesale trade is almost entirely in the hands of Mārwāri merchants from Rājputāna, known as Kayahs. The principal exports are tea, mustard-seed, raw cotton, lac, bamboo mats, and hides; the imports include rice, gram and other grain, sugar, salt, kerosene and other oils, opium, *ghī*, cotton twist and piece-goods, and hardware. The principal centres of trade are Nowgong, Rahā, and Chāparmukh, where there is a considerable business in cotton and lac; but the total is not of very great importance. Weekly markets are held for the disposal of local produce, the most important of which are those at Sālanā and Jāluguti. A considerable proportion of the trade of the District leaves it by water. Country boats come up the Kalang and take away the mustard-seed grown in the neighbourhood, while Silghāt on the Brahmaputra is an outlet for the country to the north and east. The trade of the hills comes down the Kapili and its

tributaries, and passes by the Kalang to the Brahmaputra; but of recent years a considerable portion has been dispatched from Chāparmukh by rail to Gauhāti.

Means of communication.

The Assam-Bengal Railway enters the west of the District near Jāgi Road, and, after passing 14 miles south of Nowgong town, runs up the Kapili valley to Dimāpur, where it enters Sibsāgar. Lumding, 43 miles west of Dimāpur, is the junction for the main line which pierces the North Cāchār Hills and runs along the Surmā valley to Chittagong. In 1903-4, 154 miles of unmetalled roads were maintained by the Public Works department, and 192 miles of unmetalled roads by the local board. The most important road is the trunk road, which enters the District near Nakholā, passes through Rahā, Nowgong, and Kaliābar, and then runs along the north of the Mīkīr Hills into Sibsāgar. The road from Kāmpur via Sālanā to Silghāt also carries a considerable quantity of traffic. Timber bridges have been constructed over the minor streams, but the larger rivers, such as the Kalang and Umiām, are crossed by ferries. Daily passenger steamers and large cargo boats, owned by the India General Steam Navigation Company and the Rivers Steam Navigation Company, ply on the Brahmaputra and call at the port of Silghāt; and in the rains feeder steamers go down the Kalang as far as Nowgong. Except in the west the District is fairly well provided with means of communication, but during the rains roads carrying heavy traffic are much cut up.

Famine.

Nowgong, like the rest of Assam, has never experienced famine. In 1896 and 1900 the rainfall was insufficient and the rice crop suffered from drought, but no measures of relief were necessary. Floods often do damage, but their effects are only local.

Administration.

The District contains no subdivisions, and is administered by the Deputy-Commissioner, who usually has two Assistants. Public works are in charge of the Executive Engineer stationed at Tezpur, and the Forest officer is generally a native.

Civil and criminal justice.

The Deputy-Commissioner exercises the powers of a Sub-Judge, and his Assistants have jurisdiction as Munsifs. Appeals, both civil and criminal, lie to the Judge of the Assam Valley at Gauhāti, but the chief appellate authority is the High Court at Calcutta. Special rules for the administration of the criminal law have been prescribed for the Mīkīr Hills, where the Code of Criminal Procedure is not in force, the jurisdiction of the High Court is barred, and the Deputy-Commissioner exercises the powers of life and death, subject to confirmation by the

Lieutenant-Governor. The Assamese are a peaceful and law-abiding people, and there is little serious crime.

The land revenue system resembles that in force in the rest of Assam proper, which is described in the article on ASSAM. The settlement is *ryotwāri*, engagements being made direct with the actual cultivators of the soil, and is liable to periodical revision. The District contains a large area of waste land, and the settled area of 1903-4 was only 11 per cent. of the total area, which includes, however, rivers, swamps, and hills. Mustard and summer rice are seldom grown on the same land for more than three years in succession, and the villagers are allowed to resign their holdings and take up new plots of land on giving notice to the revenue authorities. In 1903-4 more than 21,000 acres of land were so resigned and nearly 30,000 acres of new land taken up. Fresh leases are issued every year for this shifting cultivation; and a large staff of *mandals* is maintained to measure new land, test applications for relinquishment, and keep the record up to date. Like the rest of the Assam Valley, Nowgong was last resettled in 1893 for a period of ten years; but in 1901 the assessment was reduced by a lakh, as *kalā azār* had not only killed a very large proportion of the population, but had left the survivors despondent and apathetic. The average assessment per settled acre assessed at full rates in 1903-4 was Rs. 2-1-6 (maximum Rs. 4-2 and minimum Rs. 1-11). In the hills a tax is levied of Rs. 2 a house, irrespective of the area under actual cultivation. Land revenue.

The revenue from land and the total revenue are shown in the following table, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Revenue from land .	4,32	5,03	5,61	4,77
Total revenue . .	9,02*	10,09	10,34	9,88

* Exclusive of forest receipts.

Outside the municipality of NOWGONG, local affairs are managed by a board presided over by the Deputy-Commissioner. The presence of a strong European element on this board imparts to it an exceptional degree of vitality. The expenditure in 1903-4 amounted to Rs. 49,300, rather more than one-third of which was devoted to public works. The principal sources of income are local rates and a substantial grant from the Provincial revenues. Local and municipal government.

For the prevention and detection of crime the District is divided into eight investigating centres, and the civil police force consisted in 1904 of 24 officers and 166 men. Police and jails.

There are no rural police, their duties being discharged by the village headmen. The jail at Nowgong has accommodation for 77 prisoners; female convicts are sent to Tezpur.

Education. Education has not made much progress. Between 1874-5 and 1903-4 the number of pupils increased by only 46 per cent., as compared with 223 per cent. in the plains Districts as a whole. The number of pupils under instruction in 1880-1, 1890-1, 1900-1, and 1903-4 was 3,844, 5,696, 4,501, and 4,456 respectively. At the Census of 1901, 2·8 per cent. of the population (5·4 males and 0·1 females) were returned as literate. In 1903-4 there were 121 primary and 6 secondary schools in the District. The number of female scholars was 110. The great majority of the pupils under instruction were in primary classes, and no girl had advanced beyond that stage. Of the male population of school-going age 19 per cent. were in the primary stage of instruction, and of the female population of the same age less than one per cent. The total expenditure on education in 1903-4 was Rs. 45,000, of which Rs. 6,000 was derived from fees; 34 per cent. of the direct expenditure was devoted to primary schools.

Medical. In proportion to its population, the District contains a comparatively large number of dispensaries and hospitals, some of which were opened in the hope of their being able to check the progress of the epidemics from which Nowgong has recently been suffering. In 1904 there were one of the latter class, and nine of the former, with accommodation for 38 in-patients. In that year the number of cases treated was 98,000, of whom 200 were in-patients, and 1,100 operations were performed. The expenditure was Rs. 24,000.

Vaccination. The advantages of vaccination are not so much appreciated here as elsewhere, and in 1903-4 only 31 per 1,000 of the population were protected, which is 13 per 1,000 below the mean for Assam as a whole. Nowgong town is the only place in which vaccination is compulsory.

[Sir W. W. Hunter, *A Statistical Account of Assam*, vol. i (1879); B. C. Allen, *District Gazetteer of Nowgong* (1906).]

Lumding.—Railway junction in Nowgong District, Eastern Bengal and Assam, situated in 25° 45′ N. and 93° 11′ E., where the Assam Valley branch of the Assam-Bengal Railway meets the hill section which connects the Brahmaputra Valley with Chittagong. Prior to the opening of the railway, the place was buried in dense tree jungle; but a considerable area of land has now been cleared, and the railway head-quarters of the Assam Valley branch have been moved to this spot. The

line on either side of Lumding passes through miles of almost uninhabited country, so that there is at present little local trade.

Nowgong Town.—Head-quarters of the District of the same name in Eastern Bengal and Assam, situated in 26° 20′ N. and 92° 41′ E., on the left bank of the Kalang river. Though the Magistrate's court was transferred to this place from Rangāgarā nearly seventy years ago, it has made but little progress, and the population in 1901 was only 4,430. The earthquake of 1897 did serious damage to Nowgong. Most of the masonry buildings were shaken down, and the level of a neighbouring swamp was raised, with the result that parts of the town lie under water for days together during the rains. The public buildings stand near the bank of the river on a park-like lawn dotted over with fine trees; but the site, though picturesque, is hot, and generally thought unhealthy. The town contains a jail with accommodation for 77 male prisoners, a dispensary with 38 beds, and a branch of the American Baptist Mission. It is connected by road with the river port of Silghāt (32 miles away), and with the railway at Chāparmukh (17 miles). In 1894–5 Nowgong was formed into a municipality, and during the next nine years the municipal receipts and expenditure averaged Rs. 10,700. In 1903–4 the income was Rs. 10,900, including fees from pounds (Rs. 1,600) and a grant from Provincial revenues (Rs. 5,000), while the expenditure was Rs. 10,800. The water-supply is obtained from excellent masonry wells. The trade of the town is in the hands of Mārwāri merchants. The principal articles of export are mustard-seed, cotton, and lac; and the imports are salt, oil, cotton cloth, and grain. No troops are stationed in the town, but 27 members of the Assam Valley Light Horse are resident in the District. The chief educational institution is a high school, which in 1903–4 had an average attendance of 108 boys.

Silghāt.—Village in Nowgong District, Eastern Bengal and Assam, situated in 26° 37′ N. and 92° 56′ E., on the left bank of the Brahmaputra, which derives its name from the rocky spur of the Kāmākhya hills coming down to the river at this point. It is a place of call for river steamers, and prior to the construction of the railway nearly all the external trade of the District passed by this route. A temple sacred to Durgā stands on the hills immediately to the east of Silghāt.

Sibsāgar District.—District in Eastern Bengal and Assam, lying between 25° 49′ and 27° 16′ N. and 93° 3′ and 95° 22′ E., Boundaries, con-

figuration, and hill and river systems.

with an area of 4,996 square miles. It is bounded on the east by Lakhimpur; on the north by the Brahmaputra and Subansirī, which divide it from Lakhimpur and Darrang; on the west by Nowgong; and on the south by hills inhabited by Nāgā tribes. The eastern half of the District consists of a wide well-cultivated plain stretching from the foot of the Nāgā Hills to the Brahmaputra; but west of the Dhansiri the forest-clad ranges of the Mīkīr Hills, which rise in places to an elevation of 4,500 feet, project into the valley. South of the Brahmaputra lies a belt of land 3 or 4 miles in width, which affords excellent grazing in the dry season, but is exposed to heavy inundations during the rains. Beyond this the level rises, and the central portion of the District presents a succession of wide plains, producing rice, and dotted in every direction with the groves of bamboos and areca palms by which the houses of the villagers are concealed. Much of the high land in the centre and south was originally covered with tree forest, but this has been largely taken up by tea planters; and neat bungalows and trim tea gardens are now a conspicuous feature in the scenery. Along some of the tributaries of the Brahmaputra the country is too low for cultivation, and is covered with grass and reeds, while the foot of the hills is clothed with forest; but, generally speaking, very little land in the plains is available for settlement, and over considerable areas the density of population exceeds 400 persons per square mile. The Mājuli, a large island which lies north of the main channel of the Brahmaputra, presents a very different appearance. The land lies low, the population is comparatively sparse, and extensive tracts are covered with high grass jungle and forest, which is rendered particularly beautiful by the luxuriant growth of the creeping cane.

The Brahmaputra flows through the northern portion of the District, and at the western end divides Sibsāgar from Darrang. The principal tributaries on the south bank from east to west are the Burhi Dihing, which for part of its course divides Sibsāgar from Lakhimpur, the Disāng, Dikho, Jhānzi, Bhogdai or Disai, Kākadangā, and Dhansiri. All of these rivers flow in a northerly and westerly direction from the Nāgā Hills. The District contains no lakes of any importance.

Geology.

The plain is of alluvial origin, and is composed of a mixture of clay and sand. West of the Disai there is a protrusion of the subsoil, which is a stiff clay, abounding in iron nodules. The Mīkīr Hills consist of gneiss, which towards the south is overlaid by sedimentary strata of Tertiary origin. These

younger rocks consist of soft yellow sandstones, finely laminated grey clay shales, and nodular earthy limestones.

Except in the west, the proportion of forest land is comparatively small. Marsh lands are covered with high grass and reeds, the two most prominent kinds being *ikra* (*Saccharum arundinaceum*) and *nal* (*Phragmites Roxburghii*); but a large part of the District is under cultivation. The high land between the rice-fields is usually covered with short grass. Botany.

Wild animals are not common, except in the Mīkīr Hills and the marshy country at their foot, where elephants, rhinoceros, tigers, leopards, bears, buffaloes, bison, and several kinds of deer are found. In 1904, 6 persons and 990 cattle were killed by wild animals, and rewards were paid for the destruction of 27 tigers and leopards. Small game include partridges, pheasants, jungle-fowl, ducks, geese, and snipe. Fauna.

The climate, though damp, is comparatively cool and is healthy for both Europeans and natives. During the winter months the sun has little effect, as fogs often hang over the plains till a late hour, and in January the mean temperature in Sibsāgar is less than 60°. In July it rises to 84°, and the atmosphere is overcharged with moisture, and therefore oppressive. Climate.

In the plains, the average annual rainfall varies from 80 inches in the west to 95 inches near the Lakhimpur border. The supply of rain is thus always abundant, and flood is a more serious obstacle to cultivation than drought. Hailstorms occasionally do damage, especially to the tea gardens. Rainfall.

The great earthquake of June 12, 1897, was distinctly felt in Sibsāgar, but in comparison with Lower Assam the amount of damage done was small. Earthquake.

About the eleventh century the dominant power in the eastern portion of the District was the Chutiyā dynasty, ruling over a tribe of Bodo origin, which is believed to have entered Assam from the north-east and to have overthrown a Hindu Pāl dynasty reigning at Sadiyā. In the south there were scattered tribes of Morans, and the west was within the sphere of influence of the Kachāri king at Dimāpur. In 1228 the Ahoms, a Shan tribe from the kingdom of Pong, crossed the Pātkai range and established themselves in the south-east of Sibsāgar. These foreigners gradually consolidated their power, conquered the Chutiyās, and by the end of the fifteenth century had become the dominant tribe in Upper Assam. The Kachāris were next defeated; and about the middle of History.

Gargaon, the modern NĀZIRĀ, 9 miles south-east of Sibsāgar town. It was captured by Mīr Jumla in 1662; but during the rains the Muhammadan force melted away, and by the end of the seventeenth century the Ahoms had succeeded in making themselves masters of the whole of the Brahmaputra Valley above the town of Goālpāra. About this time the seat of government was shifted to Rangpur, near the modern town of Sibsāgar, which is said to have been founded by Rudra Singh, the greatest of the Ahom Rājās, in 1699. The District at this time appears to have been very prosperous. There was a strong government, and justice seems to have been administered in a fairly liberal manner, though the death penalty, when inflicted, took savage forms, and no mercy was shown to rebels or their families. Buchanan Hamilton, writing in 1804, reported that three-fourths of the whole area of Upper Assam south of the Brahmaputra was under cultivation; and the system of compulsory labour which prevailed enabled the Rājā to construct numerous good roads, and large embankments which kept the flood-water off the fields. At the same time the extreme aversion which the Assamese now have to all forms of labour for the state, and the rapidity with which, as soon as Assam passed into the hands of the British, they abandoned the various trades imposed upon them by their former rulers, shows that the Ahom system, though tending to develop the material prosperity of the country, was far from acceptable to the mass of the people. Rangpur continued to be the capital till after the accession of Gaurināth Singh in 1780. This prince was driven from his palace by a rising of the Moamarias, a powerful religious sect, and established himself first at Jorhāt and afterwards at Gauhāti. Then ensued a period of extreme misery. The Moamarias ravaged the country on their way to Gauhāti; and, after their defeat by the British troops in 1793, the Ahom prime minister laid waste the whole of the province north of the Dikho river. A fierce struggle broke out between the different pretenders to the crown, one of whom called in the Burmans to his aid. The Burmans established themselves in the province, and were only expelled by the British in 1825, after they had been guilty of the utmost barbarity. The Brahmaputra Valley was then incorporated with the territories of the East India Company; but in 1833 Upper Assam, including the District of Sibsāgar, was handed over to the Ahom Rājā, Purandar Singh. This prince, however, proved incapable of carrying out the duties entrusted to him, and in 1838 Sibsāgar was placed under

the direct management of British officers. Since that date its history has been one of peaceful progress. The native gentry were, however, impoverished by the abolition of the offices they had formerly enjoyed, and by the liberation of their slaves, and they had some grounds for feeling discontented with British rule. In 1857 one of them named Mani Rām Datta, who had been the chief revenue authority under Rājā Purandar Singh, engaged in treasonable correspondence with the young Rājā, Kandarpeswar Singh, who was residing at Jorhāt, and other disaffected persons. Mani Rām was, however, convicted and hanged, and all tendencies to rebellion were thus nipped in the bud.

Archaeology.

The District contains several enormous tanks, the largest of which are those at Sibsāgar, Rudrasāgar, Jaysāgar, and Gaurisāgar. These tanks were made by the Ahom Rājās in the eighteenth century, and in most cases they have fine brick temples standing on the broad banks by which they are surrounded. In the south-west corner of Sibsāgar the ruins of the old Kachāri capital at DIMĀPUR lie buried in dense jungle.

The people.

The population at the last four enumerations was: (1872) 317,799, (1881) 392,545, (1891) 480,659, and (1901) 597,969. The enormous increase of 88 per cent., which took place in the twenty-nine years, was due partly to the fact that Sibsāgar, unlike Lower and Central Assam, has been healthy, so that the indigenous population increased instead of dying out, but even more to the importation of a large number of garden coolies. The District is divided into three subdivisions—SIBSĀGAR, JORHĀT, and GOLĀGHĀT—with head-quarters at the towns of the same name, and contains 2,109 villages.

The table below gives, for each subdivision, particulars of area, towns and villages, and population according to the Census of 1901:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Golāghāt . .	3,015	1	792	167,068	55	+ 19·9	5,318
Jorhāt . .	819	1	651	219,137	267	+ 20·9	8,377
Sibsāgar . .	1,162	1	666	211,764	182	+ 32·1	6,698
District total	4,996	3	2,109	597,969	120	+ 24·4	20,3 3

About 89 per cent. of the population were Hindus, 4 per cent. Muhammadans, and 7 per cent. animistic tribes. The

tea industry has introduced a large number of foreigners into the District, and one-fourth of the persons enumerated here in 1901 had been born in other Provinces. Assamese was spoken by only 59 per cent. of the population, while 19 per cent. spoke Bengali and 6 per cent. Hindī. Immigration has also caused a great disparity between the sexes, there being only 886 women to every 1,000 men.

Castes and occupations.

As is natural, the Ahoms (111,100) are the most numerous caste, but there are also a large number of Chutiyās (57,000). The higher Hindu castes of Lower Assam are not so strongly represented; there were only 36,600 Kalitās in 1901, and even fewer Kewats and Koch. The priestly caste naturally tend to congregate round the Ahom capitals, and Brāhmans at the last Census numbered 14,400. The principal foreign cooly castes were Santāls (19,300), Bhuiyās (16,800), and Mundās (16,200). The chief hill tribes are Mīkīrs (22,900) and Mīris (17,600), though all of the latter are settled in the plains, and many of them, in name at any rate, have attorned to Hinduism. Members of European and allied races numbered 356 in 1901. The District is entirely rural, and no less than 91 per cent. of the population in 1901 were supported by agriculture, a high proportion even for Assam.

Christian missions.

There is a branch of the American Baptist Mission at Sibsāgar town, and about one-half of the native Christians (2,113) in 1901 were members of that sect.

General agricultural conditions.

The soil varies from pure sand to an absolutely stiff clay, but is largely composed of loam suitable for the growth of rice. In places this loam has lost some of its fertility, owing to continuous cultivation; but the character of the rice crop depends more on the level of the land and the rainfall than on the constituents of the mud puddle in which it is planted. The soil best suited for tea is high land which, in its natural state, is covered with dense tree forest.

Chief agricultural statistics and principal crops.

The following table gives the chief agricultural statistics for 1903-4, in square miles:—

Subdivision.	Area shown in the revenue accounts.			Forests.
	Settled.	Unsettled.	Cultivated.	
Golāghāt . .	307	2,708	Not available.	780
Jorhāt . .	477	342		19
Sibsāgar . .	431	731		77
Total	1,215	3,781	804	876

Most of the unsettled waste land lies in the Mīkīr Hills or in the marshes along the Brahmaputra, or is permanently covered with water; and, except in the Dhansiri valley, which is far from healthy, the area of unsettled waste suited for permanent cultivation is comparatively small. Rice is the staple food-crop, and in 1903–4 covered 540 square miles, or 64 per cent. of the total area cropped. More than 90 per cent. of the rice land is usually under *sāli*, or transplanted winter rice; and *āhu*, or summer rice, is only grown on the Mājuli and in the marshes near the Brahmaputra. Mustard and pulse, sown on land from which a crop of *āhu* has been taken, covered 21,000 and 16,000 acres respectively in 1903–4. Sugar-cane (7,000 acres) is largely grown on the high land near Golāghāt. Garden crops, which include tobacco, vegetables, pepper, *pān* or betel-leaf, and areca-palms, are a source of considerable profit to the villagers. In the hills the Mīkīrs raise rice, chillies, cotton, tobacco, and other crops, but no statistics of cultivated area are prepared.

Sibsāgar has long been a great centre of the tea industry. Tea. By 1852 the Assam Company had opened fifteen factories with 2,500 acres under cultivation, which yielded an out-turn of 267,000 lb. of manufactured tea. The industry soon recovered after the crisis of 1866, and since that time has been steadily increasing in importance. In 1904 there were 159 gardens in the District with 79,251 acres under cultivation, which yielded over 30,000,000 lb. of manufactured tea and gave employment to 182 Europeans and 94,061 natives, nearly all of whom had been brought at great expense from other parts of India. The most important companies are the Assam Company, with head-quarters at Nāzirā, about 9 miles south-east of Sibsāgar; the Jorhāt Company, with head-quarters at Cinnāmāra, 4 miles from Jorhāt; and the Brahmaputra Company, with head-quarters at Neghereting, the port for Golāghāt.

Apart from tea, the District has witnessed a steady increase Improvements in agricultural practice. of cultivation, and between 1891 and 1901 the area settled at full rates increased by 18 per cent. Little attempt has, however, been made to introduce new varieties of crops or to improve upon old methods. The harvests are regular, the cultivators fairly well-to-do, and agricultural loans are hardly ever made by Government.

As in the rest of the Assam Valley, the cattle are poor. The Cattle. buffaloes are, however, much finer animals than those imported from Bengal.

The heavy rainfall renders artificial irrigation unnecessary,

Irrigation and flood protection.

and flood rather than drought is the principal obstacle to agriculture. A considerable area of land is rendered unfit for permanent cultivation by the spill-water of the Brahmaputra and its tributaries, and in the time of the Ahom Rājās most of these rivers were confined in carefully protected embankments. On the abolition of the system of compulsory labour, these works fell into decay. The reconstruction of embankments along sections of the Dihing, Disāng, Dikho, and Darikā rivers has, however, been taken in hand.

Forests.

The 'reserved' forests of Sibsāgar covered an area of 876 square miles in 1903-4, nearly nine-tenths of which are situated in the Mīkīr Hills and the valley of the Dhansiri. They include the great Nāmbar forest, which, with the adjoining Reserves, extends over 618 square miles, and was the first area to be 'reserved' in Assam. It was constituted as far back as 1873, but little timber was extracted from it prior to the construction of the Assam-Bengal Railway. The area of 'unclassed' state forest, or Government waste land, is 3,091 square miles; but this includes the Mīkīr Hills, part of which are under cultivation, and large tracts of land practically destitute of trees. There is little trade in timber in Sibsāgar, and the out-turn from the 'unclassed' forests largely exceeds that from the Reserves. The most valued timber trees are *nahor* (*Mesua ferrea*), *ajhar* (*Lagerstroemia Flos Reginae*), *sam* (*Artocarpus Chaplasha*), *tita sapa* (*Michelia Champaca*), and *uriam* (*Bischofia javanica*).

Minerals.

Coal of inferior quality and limestone are found in the Mīkīr Hills. The hills to the south contain three coal-fields known as the Nāzirā, Jhānzi, and Disai. Petroleum is found in the two former fields; and all of them have large deposits of clay ironstone, and impure limonite containing iron ore. Under native rule this iron was extensively worked, and salt was manufactured from springs which exist in the coal-measures. Gold was also washed from almost all the rivers. At the present day a little coal is mined by the Assam Company at Telpūm on the Dikho river, and by the Singlo Company near Safrai; but the whole of the output is used in the tea factories of these two companies, and none is sold.

Arts and manufactures.

The manufactures of the District, apart from tea, are of little importance. Hardly a house is without its loom, on which the women weave cotton and silk cloths, chiefly, however, for home use and not for sale. Silk is obtained from three kinds of worms: *eri* (*Attacus ricini*), *mūgā* (*Antheraea assama*), and *pāt* (*Bombyx textor*). The *eri* worm is usually fed on the castor-oil

plant (*Ricinus communis*), the *mūgā* on the *sum*-tree (*Machilus odoratissima*), and the *pāt* on the mulberry-tree (*Morus indica*). A fine white kind of thread, which is much valued, is obtained by feeding the *mūgā* worm on the *chapa* (*Magnolia Griffithii*) and the *mezankuri* (*Tetranthera polyantha*). Silk cloth is still very largely worn by men and women alike, but is being gradually ousted by European cotton goods. *Mūgā* silk is produced in large quantities, but *pāt* is comparatively rare. Brass vessels are usually hammered out by Moriās, a degraded caste of Muhammadans; those made of bell-metal are cast by Assamese Hindus. Neither metal nor earthen vessels are, however, produced in sufficient quantities to meet the local demand, and a further supply is imported from Bengal. The jewellery consists of lockets, ear-rings, and bracelets, which are often tastefully enamelled and set with garnets or false rubies. The goldsmiths are a degraded section of the Kalitā caste, most of whom live in the neighbourhood of Jorhāt. Mustard oil and raw molasses are also manufactured, but not on any very extensive scale. European capital is invested in two saw-mills, which in 1904 employed 111 workmen. The out-turn consists almost entirely of tea boxes.

The exports of the District include cotton, mustard-seed, canes, and hides; but the only article of any importance is tea. The chief imports are rice, gram and other kinds of grain, piece-goods, salt, kerosene and other oils, and iron and hardware. The Brahmaputra and the Assam-Bengal Railway are the main channels of external trade. The chief centres of commerce are the three subdivisional towns, but the tea industry tends to decentralization. On every garden there is a shop, where the cooly can purchase almost everything that he requires; and local supplies are obtained from the numerous weekly markets held in different parts of the District. The most important of these are at NĀZIRĀ, about 9 miles south-east of Sibsāgar, and at Mariāni and Titābar in the Jorhāt subdivision. The Assamese themselves have no taste for business, and almost the whole of the external trade is in the hands of Mārwāri merchants, known as Kayahs, who amass considerable wealth. Each town also contains a few shops, where furniture, hardware, and haberdashery are sold by Muhammadan traders from Bengal. Cotton is grown by the Mīkīrs and Nāgās, who barter it for salt and other commodities with the Mārwāris of Golāghāt. Commerce.

The Assam-Bengal Railway runs through the southern part of the District from Dimāpur to Barhāt, and at Mariāni and Means of communication.

Titābar meets a light railway, which runs from those places, via Jorhāt, to Kakilāmukh on the Brahmaputra. A daily service of passenger steamers and a large fleet of cargo boats, owned and managed by the India General Steam Navigation Company and the Rivers Steam Navigation Company, ply on the Brahmaputra between Goalundo and Dibrugarh. Disāngmukh is the port for Sibsāgar, Kakilāmukh for Jorhāt, and Neghereting for Golāghāt; but steamers also call at the mouths of the Dihing, Dikho, Jhānzi, and Dhansiri. In the rains feeder vessels go up the Dikho to Santak, up the Disāng to Safrai, and up the Dhansiri to Golāghāt.

The principal roads are the trunk road, which runs for 110 miles through the District, passing through Jorhāt and Sibsāgar, and the Dhodar Alī, which leaves the trunk road at Kāmārgaon in the Golāghāt subdivision, and runs through the south-east of the District into Lakhimpur. Numerous branch roads, many of which follow the lines of the *alīs*, or old embankments constructed by forced labour under the Ahom kings, run from north to south and connect the Dhodar Alī and the trunk road. North of the Brahmaputra there is only one road, which crosses the Mājuli from Kamalābāri to Garamur. In 1903-4, 237 miles of unmetalled roads were maintained by the Public Works department and 705 miles by the local boards. Most of these roads are bridged throughout, and ferries are maintained only over the larger rivers.

District subdivisions and staff.

For general administrative purposes the District is divided into three subdivisions: SIBSĀGAR, which is under the immediate charge of the Deputy-Commissioner; and JORHĀT and GOLĀGHĀT, which are usually entrusted to European magistrates. The transfer of the head-quarters of the District from Sibsāgar to Jorhāt has, however, recently been sanctioned. The staff includes six Assistant Magistrates, two of whom are stationed at Jorhāt and two at Golāghāt, and a Forest officer.

Civil and criminal justice.

The Deputy-Commissioner has the powers of a Sub-Judge, and the Assistant Magistrates exercise jurisdiction as Munsifs. Appeals, both civil and criminal, lie to the Judge of the Assam Valley; but the chief appellate authority is the High Court at Calcutta. The people are, as a whole, law-abiding, and there is not much serious crime. In the Mīkīr Hills and in the tract recently transferred from the Nāgā Hills District a special form of procedure is in force. The High Court has no jurisdiction, and the Deputy-Commissioner exercises the powers of life and death subject to confirmation by the Lieutenant-Governor.

The land revenue system does not differ materially from that

in force in the rest of Assam proper, which is described in the article on ASSAM. The settlement is *ryotwāri*, and is liable to periodical revision. Mustard and summer rice are seldom grown on the same land for more than three years in succession, and the villagers are allowed to resign their holdings and take up new plots of land on giving notice to the revenue authorities. In 1903-4, 17,000 acres of land were so resigned and about 32,000 acres of new land taken up. Fresh leases are issued every year for this shifting cultivation; and a large staff of *mandals* is maintained to measure new land, test applications for relinquishment, and keep the record up to date. In the Mīkīr Hills the villagers pay a tax of Rs. 3 per house, irrespective of the area brought under cultivation. The District was last settled in 1893, and the average assessment per settled acre assessed at full rates in 1903-4 was Rs. 2-10-2 (maximum Rs. 4-2, minimum Rs. 1-11). A resettlement is now in progress. Land revenue.

The following table shows the revenue from land and the total revenue, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	6,19	8,11	13,96	14,22
Total revenue . .	14,11*	17,66	26,01	25,92

* Exclusive of forest receipts.

Outside the station of SIBSĀGAR and the JORHĀT and GOLĀGHĀT unions, the local affairs of each subdivision are managed by a board presided over by the Deputy-Commissioner or the subdivisional officer. The presence of a strong European element on these boards, elected by the planting community, lends to them a considerable degree of vitality. The total expenditure in 1903-4 amounted to Rs. 1,82,000, about three-fifths of which was laid out on public works. Nearly the whole of the income is derived from local rates, supplemented by a grant from Provincial revenues. Local and municipal government.

For the prevention and detection of crime, the District is divided into ten investigating centres, and the civil police force consisted in 1904 of 50 officers and 278 men. There are no rural police, their duties being discharged by the village headmen. In addition to the District jail at Sibsāgar, subsidiary jails are maintained at Jorhāt and Golāghāt, with accommodation for 56 male and 7 female prisoners. Police and jails.

Education has made more progress in Sibsāgar than in most Districts of the Assam Valley. The number of pupils under Education.

instruction in 1880–1, 1890–1, 1900–1, and 1903–4 was 4,547, 8,798, 12,063, and 12,451 respectively; and the number of pupils in the last year was more than three times the number twenty-nine years before. At the Census of 1901, 3·4 per cent. of the population (6·1 males and 0·4 females) were returned as literate. In 1903–4 the District contained 302 primary and 15 secondary schools and one special school. The number of female scholars was 236. The great majority of the pupils are in primary classes. Of the male population of school-going age 21 per cent. were in the primary stage of instruction, and of the female population of the same age less than one per cent. The total expenditure on education in 1903–4 was Rs. 1,01,000, of which Rs. 35,000 was derived from fees. About 34 per cent. of the direct expenditure was devoted to primary schools.

Medical. The District possesses 3 hospitals and 4 dispensaries, with accommodation for 58 in-patients. In 1904 the number of cases treated was 89,000, of whom 600 were in-patients, and 1,000 operations were performed. The expenditure was Rs. 15,000, half of which was met from Local and municipal funds.

Vaccination. In 1903–4, 46 per 1,000 of the population were successfully vaccinated, which is a little above the proportion for the Province as a whole. Vaccination is compulsory only in the towns of Sibsāgar, Jorhāt, and Golāghāt.

[Sir W. W. Hunter, *A Statistical Account of Assam*, vol. i (1879); L. J. Kershaw, *Assessment Reports, Central Golāghāt, Western Golāghāt, Northern Jorhāt, Central Jorhāt, and Southern Jorhāt Group* (1905); B. C. Allen, *District Gazetteer*, (1906).]

Golāghāt Subdivision.—Most westerly subdivision of Sibsāgar District, Eastern Bengal and Assam, lying between 25° 49′ and 26° 55′ N. and 93° 3′ and 94° 11′ E., with an area of 3,015 square miles. The eastern portion is a level plain, which supports over 200 persons per square mile. Rice is grown on the low land, and tea and sugar-cane on land which is too high for rice. West of Golāghāt town there are comparatively few inhabitants. The upper valley of the Dhansiri is for the most part covered with dense jungle, and north of this river lie the forest-clad Mīkīr Hills. The density for the whole subdivision is thus only 55 persons per square mile, compared with 120 for the District as a whole. The population in 1901 was 167,068, or nearly 20 per cent. more than in 1891 (139,203). The subdivision contains one town, Golāghāt

(population, 2,359), the head-quarters; and 792 villages. The annual rainfall at Golāghāt averages 82 inches, but at Dimāpur, on the southern border, less than 60 inches. The tea industry has contributed to the development of the subdivision. In 1904 there were 47 gardens, with 20,324 acres under plant, which gave employment to 45 Europeans and 23,883 natives. In the Mīkīr Hills and the Dhansiri valley are extensive forest Reserves, which in 1903–4 covered an area of 780 square miles. The demand for land revenue and cesses in 1903–4 was Rs. 4,18,000.

Jorhāt Subdivision.—Central subdivision of Sibsāgar District, Eastern Bengal and Assam, lying between 26° 22′ and 27° 11′ N. and 93° 57′ and 94° 36′ E., with an area of 819 square miles. About two-fifths of the subdivision lies north of the main channel of the Brahmaputra, and is known as the MĀJULI island, a comparatively sparsely peopled tract, liable to damage from flood. The part south of the river is one of the most populous portions of the Assam Valley, and in places has a density exceeding 600 persons per square mile. The swamps fringing the Brahmaputra are inundated in the rains; but farther inland stretches a broad plain, the lower part of which is cultivated with rice, while tea and sugar-cane are grown on the higher land. The population in 1901 was 219,137, about one-fourth of which was enumerated on tea gardens, as compared with 181,152 in 1891. The subdivision contains one town, JORHĀT (population, 2,899), the head-quarters; and 651 villages. The annual rainfall at Jorhāt town averages 80 inches, but on the eastern border of the subdivision it is a little higher. In 1904 there were altogether 56 tea gardens with 30,851 acres under plant, which gave employment to 62 Europeans and 36,849 natives. The subdivision is particularly well supplied with means of communication, as the Assam-Bengal Railway runs along the south-east, and at Titābar and Mariāni meets a light state railway, which passes through Jorhāt town to the bank of the Brahmaputra. The demand for land revenue and cesses in 1903–4 was Rs. 5,79,000.

Sibsāgar Subdivision.—Subdivision of Sibsāgar District, Eastern Bengal and Assam, lying between 26° 42′ and 27° 16′ N. and 94° 24′ and 95° 22 E., with an area of 1,162 square miles. It contains one town, SIBSĀGAR (population, 5,712), the head-quarters; and 666 villages. The subdivision lies on the south bank of the Brahmaputra, and is bounded on the south by the hills inhabited by Nāgās. It was the original centre from

which the Ahom tribe extended their influence over the valley of the Brahmaputra, and evidences of their occupation are to be found in numerous large tanks, embankments, and ruins of temples and palaces. The population in 1901 was 211,764, or nearly one-third more than in 1891 (160,304). This enormous increase is due partly to natural growth among the Assamese, who are found here in large numbers, and also to the importation of coolies for tea cultivation. In 1904 there were 56 gardens with 28,076 acres under plant, which gave employment to 75 Europeans and 33,329 natives. The staple food-crop is *sāli*, or transplanted winter rice; but much damage is done to cultivation by the tributaries of the Brahmaputra, and steps have recently been taken to restore the embankments which confined these rivers in the time of the Ahom Rājās. The subdivision, as a whole, supports 182 persons per square mile; but in the Nāmditol *tahsīl*, which covers an area of 160 square miles, the density is as high as 364, and little good land remains available for settlement except in tracts which require to be protected from flood. In the west the annual rainfall is 85 inches, but on the eastern border it is about 10 inches more. The demand for land revenue and cesses in 1903-4 was Rs. 5,66,000.

Auniāti.—Village in Sibsāgar District, Eastern Bengal and Assam, situated in 26° 53′ N. and 94° 5′ E., on the right bank of the Brahmaputra, in the Mājuli island. It contains the principal Vaishnav *sattra*, or priestly college, in Assam, whose Gosain, or head priest, exercises great influence over the Assamese. The Gosains have always been distinguished by their loyalty to Government, and render a real service to the administration by encouraging purity of life and obedience to the authorities. The *sattra* is said to have been founded in the sixteenth century, and is supported by the offerings of its numerous disciples and by grants of revenue-free land made by the Ahom Rājās and confirmed by the British Government, which cover in all nearly 22,000 acres. The college consists of a large prayer hall, surrounded by lines of barracks inhabited by celibate monks, and contains a printing press. None of the buildings is of masonry.

Dakhinpāt.—Village in Sibsāgar District, Eastern Bengal and Assam, situated in 26° 55′ N. and 94° 16′ E., on the right bank of the Brahmaputra, in the Mājuli island. It is the site of a Vaishnav *sattra*, or priestly college, whose Gosain, or high priest, ranks second only to the Auniāti Gosain in the estimation of the Assamese. These Gosains exercise immense

influence over the villagers, but they exercise it wisely and well. They are loyal supporters of the Government, and free from the bigotry that is sometimes found in spiritual leaders of the people. The college is said to have been founded in the sixteenth century, and is supported by voluntary contributions and by grants of revenue-free land covering over 12,000 acres, made by the Ahom Rājās and confirmed by the British Government. The site of the *sattra* is extremely picturesque. It consists of a large quadrangle formed by the lines of barracks occupied by the monks, and containing several tanks whose banks are shaded by tall trees. None of the buildings is, however, of masonry. The Dakhinpāt Gosain is the only person in Assam exempted from personal attendance in the civil courts.

Dimāpur.—Village in Sibsāgar District, Eastern Bengal and Assam, situated in 25° 54′ N. and 93° 44′ E., on the right bank of the Dhansiri river. Population (1901), 566. It is the site of an early capital of the Kachāri Rājās, which was sacked by the Ahoms in 1536. The capital was then abandoned, but its ruins and tanks are still to be found among the dense jungle of the Nāmbar forest, a pathless wilderness of trees which stretches for many miles on every side. The following description of these ruins is quoted, in a condensed form, from the *Assam Administration Report* for 1880–1. The site of the city is now overgrown with dense jungle, and till recently, when a small bazar was started, was entirely uninhabited. There are several splendid tanks of clear water, and a walled enclosure, supposed to have been a fort. The walls must originally have been upwards of 12 feet in height by 6 in width, and are built throughout of burnt brick of excellent quality. The enclosure is entered through a Moorish arch in a solid brick-built gateway with some pretensions to architectural beauty. It is as nearly as possible a perfect square, each side being about 800 yards in length and protected on the two sides farthest from the river by a deep moat. Inside the fortification are three small ruined tanks. The most interesting relics are, however, the monolithic pillars, one group of which, ranged in four rows of fifteen each, stands not far from the gateway on the left hand, and another smaller group at a little distance on the right. Of the first group, two rows consist of mushroom-shaped pillars with rounded heads, and the other two of square pillars of a very peculiar V-shape. All are richly covered with tracery of some artistic merit. They are very thick in proportion to their height, the largest standing about 15 feet above the

ground with a diameter of 6 feet, and resemble in appearance a set of gigantic chessmen. It is possible that these pillars were erected at the recognized place of sacrifice or to commemorate the Rājā's feasts. At the present day Nāgās erect a round-topped post when they have feasted the village on a *mithan*, and a V-shaped post if they have slain a cow. The wild Was of the Shan States also erect a V-shaped post for each buffalo they offer to the spirits. No trace of inscriptions or written character of any kind has been found. Since the construction of the Assam-Bengal Railway, Dimāpur has become the base of trade for the Nāgā Hills and Manipur.

[*Report of Archaeological Survey*, *Bengal Circle*, 1902–3.]

Garamur.—Village in Sibsāgar District, Eastern Bengal and Assam, situated in 26° 59′ N. and 94° 9′ E., in the Mājuli island. It is the site of one of the three Vaishnav *sattras* or colleges which are held in highest estimation by the Assamese. The Gosains or high priests of these *sattras* exercise great influence over the people, but they are loyal supporters of the Government and display an enlightened and progressive spirit. The *sattra* is chiefly supported by the offerings of its numerous disciples. It is said to have received a grant of nearly 40,000 acres of revenue-free land from the Ahom Rājās; but the proofs of title were destroyed by the Burmans, and the grants lapsed, as the Gosain, who was living at Brindāban, took no steps to support his claims when they were under examination by Government. A grant of 331 acres of revenue-free land has, however, recently been sanctioned by the Government of India.

Golāghāt Town.—Head-quarters of the subdivision of the same name in Sibsāgar District, Eastern Bengal and Assam, situated in 26° 31′ N. and 93° 59′ E., on the right bank of the Dhansiri river. The town had a population in 1901 of 2,359, and is administered as a Union under (Bengal) Act V of 1876, the expenditure in 1903–4 amounting to about Rs. 6,000. There is a flourishing bazar, the principal shops in which are owned by Mārwāri merchants, who do a large business with the tea gardens in the neighbourhood. The chief articles of export are cotton, which is brought down by the Nāgās, mustard-seed, and molasses. The chief imports are cotton piece-goods, grain and pulse, kerosene and other oils, and salt. During the rains feeder-steamers come up the Dhansiri as far as Golāghāt, but in the dry season the nearest steamer *ghāt* is at Shikārighāt, 18 miles away. The nearest railway station is at Kamarband Alī, about 8 miles south of the town. The

subdivisional officer is almost invariably a European. Besides the usual offices, Golāghāt has a small jail, a dispensary with 14 beds, and a high school under private management.

Jorhāt Town.—Head-quarters of the subdivision of the same name in Sibsāgar District, Eastern Bengal and Assam, situated in 26° 45′ N. and 94° 13′ E., on the left bank of the Disai river. The town had a population in 1901 of 2,899, and is administered as a Union under (Bengal) Act V of 1876, the expenditure in 1903–4 amounting to nearly Rs. 8,000. Jorhāt was the capital of the Ahom Rājās after Gaurināth Singh had been driven from Rangpur near Sibsāgar at the end of the eighteenth century. It contains a fine tank of excellent water, on the banks of which the subdivisional officer's residence and office have been located, and the remains of considerable earthworks. There is a flourishing bazar, the largest shops in which are owned by Mārwāri merchants, who do a large business with the tea gardens in the neighbourhood. The principal articles of import are cotton piece-goods, grain, salt, and oil, the chief exports being mustard-seed, cane, and hides. Furniture and haberdashery are sold by Muhammadan traders from Bengal. A colony of Telis has been formed in the town, who express mustard oil in the ordinary bullock-mills of Upper India; and Jorhāt is the chief centre for the manufacture of Assamese jewellery, which usually consists of lac covered with gold and enamel and set with cheap stones. The public buildings include a small jail, a hospital with 24 beds, and two high schools which in 1903–4 had an average attendance of 452 boys. A daily market for the sale of native produce is numerously attended; and, owing to the density of the population and the presence of a large number of prosperous gardens in the neighbourhood, Jorhāt has become the most important centre of trade in the District. A light state railway passes through the town, connecting it with the Brahmaputra at Kakilāmukh and with the Assam-Bengal Railway at Mariāni and Titābar. The transfer of the head-quarters of the District from Sibsāgar to Jorhāt has recently been sanctioned.

Nāzirā (or Gargaon).—Village in Sibsāgar District, Eastern Bengal and Assam, situated in 26° 56′ N. and 94° 45′ E., on the left bank of the Dikho river, about 9 miles south-east of Sibsāgar town. It was the capital of the Ahom Rājās from the middle of the sixteenth to the end of the seventeenth century, but was twice captured, once by the Koch king Nar Nārāyan and once by Mīr Jumla, governor of Bengal. The Muhammadan historian states that the town had four gates, each about 3 *kos*

distant from the Rājā's palace. The palace itself was a magnificent structure, the building of which had afforded occupation to 12,000 workmen for a year, and the ornaments and curiosities with which the whole woodwork was filled defied all description. Robinson, writing in 1844, describes the ruins as follows :—

'The royal palace was surrounded by a brick wall about 2 miles in circumference; but the whole town and its suburbs appear to have extended over many square miles of country. The ruins of gateways, built chiefly of masonry, are still to be seen within the fortified circumvallations which surrounded the town. One of the gateways is composed principally of large blocks of stone, bearing marks of iron crampings, which evidently show that they once belonged to far more ancient edifices.'

Nāzirā is now the head-quarters of the Assam Tea Company, and a considerable bazar has sprung up on the banks of the river, to which Nāgās bring down chillies, betel-leaf, rubber, and bamboo mats. Salt, grain, piece-goods, and oil are imported in large quantities to meet the demands of the cooly population. The place is connected by rail with Gauhāti and Dibrugarh, and contains a high school with an average attendance in 1903–4 of 164 boys.

Sibsāgar Town.—Head-quarters of the District and subdivision of the same name, Eastern Bengal and Assam, situated in 26° 59′ N. and 94° 38′ E., on the right bank of the Dikho river. It lies on the trunk road along the south bank of the Brahmaputra, and is connected by road with the railway at Nāzirā and with the Brahmaputra at Disāngmukh, the distance of each of these places being about 9 miles. Population (1901), 5,712. Sibsāgar is somewhat unfavourably situated for trade, and the population shows little tendency to increase. The town takes its name from a tank (*sāgar*), a mile and three-quarters in circumference, which was constructed by the Ahom Rājā Sib Singh in 1722. Between 1699 and 1786 Rangpur near Sibsāgar was the capital of the Ahoms, but in the latter year the Rājā was driven by his rebellious subjects to Jorhāt. The rainfall is heavy (94 inches), but the town is healthy, though during the rains most of the country in the neighbourhood is flooded. It is the head-quarters of the District staff and of a branch of the American Baptist Mission. In addition to the usual public buildings, there are a hospital with 20 beds and a jail with accommodation for 77 prisoners. Sibsāgar was constituted a station under (Bengal) Act V of 1876 in 1880.

The municipal receipts and expenditure during the ten years ending 1902-3 averaged Rs. 11,000. In 1903-4 the income was Rs. 11,500, including taxes on houses and lands (Rs. 2,400) and grant from Provincial revenues (Rs. 5,000), while the expenditure was Rs. 11,200. The principal imports are cotton piece-goods, oil, grain, and salt; the exports are inconsiderable. The chief educational institutions are two high schools, which had an average attendance of 393 boys in 1903-4. About 150 members of the Assam Valley Light Horse were resident in the District in 1904. The transfer of the head-quarters of the District to Jorhāt has recently been sanctioned.

Boundaries, configuration, and hill and river systems.

Lakhimpur District.—District in Eastern Bengal and Assam, occupying the extreme eastern portion of the Brahmaputra Valley. The actual boundaries have never been definitely determined; but an inner line has been laid down, which serves as the limit of ordinary British jurisdiction, without prejudice to claims to the territory on the farther side. The tract of land thus defined lies between 26° 49′ and 27° 52′ N. and 93° 46′ and 96° 5′ E., with an area of 4,529 square miles. In its broader sense, the District is bounded on the west by Darrang and Sibsāgar; on the north by the Daflā, Mīri, Abor, and Mishmi Hills; on the east by the Mishmi and Khamti Hills; and on the south by the hills inhabited by independent tribes of Nāgās. The portion of the District included within the inner line consists of a broad plain surrounded on three sides by hills, and divided by the channel of the Brahmaputra. Near the river lie extensive marshes covered with reeds and elephant-grass, but as the level rises these swamps give place to rice-fields and villages buried in thick groves of fruit trees and bamboos. South of the Brahmaputra a great portion of the plain is covered with trim tea gardens, many of which have been carved out of the dense forest, which still lies in a belt many miles broad along the foot of the hills; but on the north bank the area under tea is comparatively small, and there are wide stretches of grass and tree jungle. The aspect of the plain is thus pleasingly diversified with forest, marsh, and river; and the hills themselves, with their snow-capped summits, afford a striking background to the scene on a clear day in winter. The Brahmaputra runs through the District, receiving on the north bank the DIBĀNG, the DIHĀNG, and the SUBANSIRĪ. Even in the dry season large steamers can proceed to within a few miles of Dibrugarh, and during the rains boats of considerable burden go as far as Sadiyā. Beyond that place the river is still navigable for light native craft almost

to the Brahmakund. The principal tributaries on the south bank are the NOA DIHING, the DIBRU, and the BURHI DIHING. There are no lakes of any importance; but there are numerous *bīls* or marshes, of which the largest are at Bangalmāri and Pabhamāri on the north bank of the Brahmaputra.

Geology. The plain is of alluvial origin, consisting of a mixture of clay and sand in varying proportions. The hills which surround it on three sides belong to the Tertiary period, and are composed of sandstones and shales.

Botany. Low-lying ground is covered with high grass and reeds, the three principal varieties being *ikra* (*Saccharum arundinaceum*), *nal* (*Phragmites Roxburghii*), and *khagari* (*Saccharum spontaneum*). The central portion of the plain is largely under cultivation, but near the hills the country is covered with dense evergreen forest.

Fauna. Wild animals are common, including elephants, rhinoceros, tigers, leopards, bears, buffaloes, bison, and deer. A curious species of wild goat or antelope called *takin* (*Budorcas taxicolor*) is found in the Mishmi Hills, but no European has yet succeeded in shooting a specimen. In 1904 wild animals killed 1,559 cattle, and rewards were paid for the destruction of 58 tigers and leopards; 39 elephants were also captured in that year. Small game include florican, partridge, jungle-fowl, geese, ducks, and snipe.

Climate. The climate is particularly cool and pleasant, and only during the three months of June, July, and August is inconvenience experienced from the heat. In December and January fogs are not uncommon, and fires are often needed at night even in the month of March. The District, as a whole, is healthy, except in places where the forest has been recently cleared.

Rainfall. The hills with which Lakhimpur is surrounded on three sides, and the vast expanses of evergreen forest, tend to produce a very heavy rainfall. At Pathālipām, under the Mīri Hills, the annual rainfall averages 168 inches, but towards the south it sinks to 100 inches, and in places to a little less.

The earthquake of June 12, 1897, did very little damage, and the District does not suffer much from either storm or flood.

History. The earliest rulers of Lakhimpur of whom tradition makes any mention seem to have been Hindus of the Pāl line, whose capital was situated in the neighbourhood of Sadiyā. About the eleventh century they were overthrown by the Chutiyās, a tribe of Tibeto-Burman origin, who entered Assam from the north-east and established themselves on the upper waters of the Brahmaputra. In 1523 the Chutiyās themselves, after some

centuries of conflict, were finally crushed by the Ahoms, a Shan tribe who had descended from the Pātkai into Sibsāgar District nearly 300 years before; and Lakhimpur, with the rest of Assam proper, formed part of the territories of the Ahom Rājā. Towards the close of the eighteenth century, when the Ahom kingdom was tottering to its fall, the high-priest of the Moamarias, a Vaishnav sect, rose in rebellion against the reigning king. For a time, the rebels met with a measure of success; but when the royal arms were again in the ascendant, the Ahom prime minister revenged himself by desolating the whole of Lakhimpur lying south of the Brahmaputra. A few years later the Burmans entered the valley, at the invitation of one of the claimants to the Ahom throne, and were guilty of gross atrocities before they were finally expelled by the British in 1825. The District was by this time almost depopulated and was reduced to the lowest depths of misery. During the confusion attendant on the break-up of the Ahom kingdom, the head of the Moamaria sect established himself in a position of quasi-independence in the Matak territory, a tract of land lying between the Brahmaputra and the Burhi Dihing, and bounded on the east by an imaginary line drawn due south from Sadiyā. On the occupation of the country by the British this chief, who bore the title of Bor Senāpati, was confirmed in his fief on the understanding that he provided 300 men for the service of the state. The arrangement was, however, found to be unsatisfactory; and, in lieu of any claim on the services of his subjects, Government accepted a revenue of Rs. 1,800. In 1842, after the death of the Bor Senāpati, the whole of the Matak territory was annexed. Matak was not the only fief carved out of the decaying Ahom empire. In 1794 the Khamtis crossed the Brahmaputra, and ousted the Assamese governor of Sadiyā. The Ahom king was compelled to acquiesce in this usurpation, and the Khamti chief was accepted as a feudatory ruler of Sadiyā by the British Government. In 1835 it was found necessary to remove him for contumaciously seizing some territory claimed by the Matak chief, in defiance of the orders of the British officer; and the country was brought under direct administration. Four years later the Khamtis rose, surprised Sadiyā, killed the Political Agent, Colonel White, and burned the station. The rising was, however, put down without difficulty, and the tribe has given no trouble since that date. In 1833 the North Lakhimpur subdivision was handed over to the Ahom Rājā, Purandar Singh, as it was at that time proposed to establish him as a feudatory prince in

the two upper Districts of the Assam Valley. Five years later this territory was again resumed, as the Rājā was found unequal to the duties entrusted to him. The history of the District since it has been placed under British administration is a story of continuous development and increasing prosperity. From time to time the tribes inhabiting the ABOR and MISHMI HILLS have violated the frontier, but their raids have had no material effect upon the general welfare of the people.

Archaeology.

There are few remains of archaeological interest in Lakhimpur, but the ruins found near Sadiyā show that this portion of Assam must once have been under the control of princes of some power and civilization.

The people.

The population of the District at the last four enumerations was: (1872) 121,267, (1881) 179,893, (1891) 254,053, and (1901) 371,396. Within twenty-nine years the population has more than trebled, this enormous increase being partly due to the fact that Lakhimpur, unlike Lower and Central Assam, has been healthy, so that the indigenous inhabitants increased in numbers, but still more to the importation of thousands of coolies required for the tea gardens and other industries of the District. Lakhimpur is divided into the two subdivisions of DIBRUGARH and NORTH LAKHIMPUR, with head-quarters at the places of the same name. It contains one town, DIBRUGARH (population, 11,227), the District head-quarters; and 1,123 villages.

The following table gives statistics of area, towns and villages, and population according to the Census of 1901:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
North Lakhimpur	1,275	...	323	84,824	67	+ 33·7	2,636
Dibrugarh . .	3,254	1	800	286,572	88	+ 50·3	10,443
District total	4,529	1	1,123	371,396	82	+ 46·1	13,079

About 90 per cent. of the population in 1901 were Hindus, 3 per cent. Muhammadans, and 5 per cent. members of animistic tribes. The proportion of foreigners is very high, and 41 per cent. of the people enumerated in Lakhimpur in 1901 had been born outside the Province. A large number of these immigrants have left the tea gardens, and settled down to ordinary cultivation in the villages. Assamese was spoken

by only 39 per cent. of the population, while 21 per cent. returned Bengali, and 20 per cent. Hindī or Mundārī, as their usual form of speech.

Castes and occupations. The principal Assamese castes are the Ahoms (59,100), Chutiyās (17,500), Kachāris (25,200) and Mīris (24,900). The chief foreign castes are the Mundās (30,200), Santāls (17,500), and Bhumij, Bhuiyās, and Oraons. The higher Hindu castes are very poorly represented. Members of European and allied races numbered 469 in 1901. In spite of the existence of coal-mines, oil-mills, railways, and a prosperous trading community, 87 per cent. of the people are dependent upon the land for their support.

Christian missions. A clergyman of the Additional Clergy Society is stationed at Dibrugarh, and there are two missionaries in the District. The total number of native Christians in 1901 was 2,606.

General agricultural conditions. The soil varies from pure sand to a stiff clay, which mix in varying proportions to form a loam. The high land is admirably adapted for the growth of tea; and the abundance of the rainfall, the immunity from flood, the large proportion of new and unexhausted land, and the opportunities for selection afforded by the sparseness of the population, combine to render agriculture a more than usually lucrative occupation.

Chief agricultural statistics and principal crops. The following table gives the chief agricultural statistics for 1903–4, in square miles, showing what a large proportion of the District is still lying waste:—

Subdivision.	Area shown in the revenue accounts.			Forests.
	Settled.	Unsettled.	Cultivated.	
North Lakhimpur	137	1,138	106	29
Dibrugarh . .	526	2,728	282	311
Total	663	3,866	388	340

Rice is the staple crop, and in 1903–4 covered 231 square miles, or 57 per cent. of the total area cropped. More than four-fifths of the rice crop is usually *sāli* or transplanted winter rice, and the greater part of the remainder is *āhu*, or summer rice grown in the marshy tracts before the floods rise. Tea is the only other crop of any importance; but minor staples include pulse (6,100 acres), mustard (8,000 acres), and sugarcane (3,500 acres). No agricultural statistics are prepared for the land occupied by hill tribes, who pay a poll tax irrespective of the area cultivated. The usual garden crops are grown including plantains, vegetables, tobacco, *pān* or betel-leaf, and

areca-palms. The last two were introduced into Lakhimpur after the country had been occupied by the British.

Tea.

Lakhimpur was the scene of the first attempts at tea cultivation by Government in 1835, and the Assam Company commenced operations here in 1840. The industry has passed through many vicissitudes, which were chiefly due to speculation, but the abundant rainfall and fertile soil have always given a large measure of prosperity to the gardens of Upper Assam. Of recent years there has been a great expansion of the industry. In 1880, 19,700 acres were under cultivation. By 1896 the area had risen to 48,200 acres, and in the next five years there was a further increase of 20,000 acres. In 1904 there were altogether 143 gardens with 70,591 acres under plant, which yielded more than 30,000,000 lb. of manufactured tea and gave employment to 199 Europeans and 100,849 natives, the latter of whom had been recruited from other parts of India. The principal companies are the Dum Dumā Company, with head-quarters at Dum Dumā; the Jokai Company, with head-quarters at Pānitolā; the Assam Frontier Tea Company, with head-quarters at Tālāp; and the Dihing Company, with head-quarters at Khowāng.

Extension of cultivation.

Apart from tea, the District has witnessed a rapid increase of cultivation, and between 1891 and 1901 the area settled at full rates, excluding land held by planters, increased by 56 per cent. Little attempt has, however, been made to introduce new crops or to improve upon old methods. The harvests are regular, the cultivators fairly well-to-do, and agricultural loans are hardly ever made by Government. The heavy rainfall renders it unnecessary to have recourse to artificial irrigation.

Cattle.

The cattle are of very poor quality, with the exception of buffaloes, which are fine animals. The inferior character of the live stock is chiefly due to neglect, and to disregard of the most elementary rules of breeding, as there is still abundance of waste land suitable for grazing, and in few places is any difficulty experienced in obtaining pasture.

Forests.

The 'reserved' forests of Lakhimpur covered an area of 340 square miles in 1903-4. The largest Reserves are the Upper Dihing near Mārgheritā, and the Dibru near Rangāgorā on the Dibru river. The wants of the District are, however, fully supplied from the Government waste lands, which cover an area of 3,062 square miles; and as there is no external trade in timber, the out-turn from the Reserves has hitherto been insignificant. The most valuable timber trees are *nahor*

(*Mesua ferrea*), *ajhar* (*Lagerstroemia Flos Reginae*), *makai* (*Shorea assamica*), and *bola* (*Morus laevigata*); but the largest trade is done in *simal* (*Bombax malabaricum*), a soft wood much in request for tea boxes. The duty levied on rubber, whether collected within or beyond the frontier, is a valuable source of revenue, the receipts under this head having averaged nearly a quarter of a lakh during the decade ending 1901. A considerable sum is also paid for the right to cut cane in Government forests.

Minerals. The hills to the south contain two important coal-fields, those of Mākum and Jaipur. The Mākum field is extensively worked near MĀRGHERITĀ, the out-turn in 1903 amounting to 239,000 tons, on which a royalty of Rs. 36,000 was paid to Government. Petroleum oil is found in the same strata, and a large refinery has been constructed near the wells at DIGBOI. The Government revenue from oil in 1903–4 was Rs. 3,750. The coal measures also contain salt springs, and ironstone and iron ore in the form of impure limonite, from which iron used to be extracted in the days of native rule. Boulders of limestone are found in the bed of the Brahmaputra near Sadiyā, and there is a thick deposit of kaolin near the Brahmakund. Under the Ahom Rājās a gold-washing industry was carried on in most of the rivers; but this gold is probably doubly derivative, and is washed out of the Tertiary sandstones of the sub-Himālayan formations, which are themselves the result of the denudation of the rocks in the interior of the chain. A considerable sum of money was expended in 1894 on the exploration of the Lakhimpur rivers; but gold was not found anywhere in paying quantities, and no return was obtained on the capital invested.

Arts and manufactures. Apart from tea, oil, and saw-mills, and the pottery and workshops of the Assam Railways and Trading Company, local manufactures are of little importance. The Assamese weave cotton and silk cloth, but more for home use than for sale. Brass vessels are produced in small quantities by the Moriās, a class of degraded Muhammadans, but the supply is not equal to the demand. Jewellery is made, but only as a rule to order, by the Brittial Baniyās. The raw molasses produced from sugar-cane is of an excellent quality, and finds a ready sale, but the trade has not yet assumed any considerable dimensions. In addition to the large oil refinery at Digboi, brick and pottery works have been opened at Ledo near Mārgheritā. In 1904 there were four saw-mills in the District, employing 743 hands. The largest mills were

situated at Sisi, and the greater part of the out-turn consists of tea boxes.

Commerce. Till recently, the Brahmaputra was the sole channel of external trade, but the completion of the Assam-Bengal Railway has provided through land communication with Chittagong and Gauhāti. The bulk of the external trade of the District is carried on with Calcutta. The chief exports are tea, coal, kerosene and other oils, wax and candles, hides, canes, and rubber. The imports include rice, gram and other kinds of grain, *ghī*, sugar, tobacco, salt, piece-goods, mustard and other oils, corrugated iron, machinery, and hardware. The trade of the District is almost entirely in the hands of the Kayahs, as the Mārwāri merchants are called; but in the larger centres a few shops for the sale of furniture and haberdashery are kept by Muhammadans from Bengal. These centres are DIBRUGARH, the head-quarters town, SADIYĀ, DUM DUMĀ, Mārgheritā, JAIPUR, Khowāng, and North Lakhimpur; but the Kayahs' shops are scattered all over the District, and numerous weekly markets are held, at which the cultivators can dispose of their surplus products and the coolies satisfy their wants. Most of the frontier trade is transacted at Sadiyā and North Lakhimpur, and is chiefly carried on by barter. The principal imports are rubber, ivory, wax, and musk.

Means of communication. A daily service of passenger steamers and a fine fleet of cargo boats, owned and managed by the India Steam Navigation Company and the Rivers Steam Navigation Company, ply on the Brahmaputra between Goalundo and Dibrugarh. Feeder steamers also go up the Subansirī to Bordeobām. South of the Brahmaputra, Lakhimpur is well supplied with means of communication. A metre-gauge railway runs from Dibrugarh *ghāt* to the Ledo coal-mines, a distance of 62 miles, with a branch 16 miles long from Mākum junction to Tālāp. This line taps nearly all the important tea gardens, and at Tinsukiā meets the Assam-Bengal Railway, and thus connects Dibrugarh with Gauhāti, and with the sea at Chittagong. In addition to the railway, there were in the District, in 1903-4, 20 miles of metalled and 211 miles of unmetalled roads maintained by the Public Works department, and 6 miles of metalled and 516 miles of unmetalled roads kept up by the local boards. The most important thoroughfares are the trunk road, which runs from the Dihing river to Sadiyā, a distance of 86 miles, and the road from Dibrugarh to Jaipur. On the north bank of the Brahmaputra population is comparatively sparse, the rainfall is very heavy, and travelling during the rains is difficult.

Most of the minor streams are bridged, but ferries still ply on the large rivers.

Famine. Famine or scarcity has not been known in Lakhimpur since it came under British rule, but prices usually range high, as the District does not produce enough grain to feed the large immigrant population.

District subdivisions and staff. There are two subdivisions: DIBRUGARH, which is under the immediate charge of the Deputy-Commissioner; and NORTH LAKHIMPUR, which is usually entrusted to a European Magistrate. The ordinary District staff includes three Assistant Magistrates, one of whom is stationed at North Lakhimpur, and a Forest officer. The Sadiyā frontier tract in the north-east corner is in charge of an Assistant Political officer. The Criminal Procedure Code is not in force in this tract, which is excluded from the jurisdiction of the High Court, and the Deputy-Commissioner exercises powers of life and death, subject to confirmation by the Lieutenant-Governor.

Civil and criminal justice. The Deputy-Commissioner has the powers of a Sub-Judge, and the Assistant Magistrates exercise jurisdiction as Munsifs. Appeals, both civil and criminal, lie to the Judge of the Assam Valley, but the chief appellate authority is the High Court at Calcutta. The people are as a whole law-abiding, and there is little serious crime. Special rules are in force for the administration of justice in the Sadiyā frontier tract.

Land revenue. The land revenue system resembles that in force in the rest of ASSAM proper. The settlement is *ryotwāri*, being made direct with the actual cultivators of the soil, and is liable to periodical revision. The District contains large tracts of waste land, and the settled area of 1903–4 was only 15 per cent. of the total, including rivers, swamps, and hills. Villagers are allowed to resign their holdings and take up new plots of land on giving notice to the revenue authorities, and in 1903–4 nearly 14,000 acres of land were so resigned and 25,000 acres of new land taken up. Fresh leases are issued every year for this shifting cultivation; and a large staff of *mandals* is maintained to measure new land, test applications for relinquishment, and keep the record up to date. Like the rest of Assam proper, the District was last resettled in 1893. The average assessment per settled acre assessed at full rates in 1903–4 was fixed at Rs. 2–7–4 (maximum Rs. 4–2, minimum Rs. 1–11).

The table on the following page shows the revenue from land and total revenue, in thousands of rupees.

Local and municipal. Outside the municipality of DIBRUGARH, the local affairs of each subdivision are managed by a board presided over by

govern-
ment.

the Deputy-Commissioner or the subdivisional officer. The European non-official members of these boards, elected by the planting community, give valuable aid to the administration. The total expenditure in 1903-4 amounted to Rs. 1,31,000, more than half of which was laid out on public works. Less than one-third of the income is derived from local rates, which are supplemented by a large grant from Provincial revenues. The District is in a comparatively advanced state of development, but the population is so scanty that it is impossible to provide entirely for local requirements out of local taxation.

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue .	1,90	2,59	5,30	5,88
Total revenue .	7,98*	110,0	18,03	19,21

* Exclusive of forest revenue.

Police and jails.

For the prevention and detection of crime, the District is divided into ten investigating centres, and the civil police force consisted in 1904 of 29 officers and 154 men. There are no rural police, their duties being discharged by the village headmen. The military police battalion stationed in the District has a sanctioned strength of 91 officers and 756 men; but it supplies detachments for duty in Darrang and Sibsāgar, besides holding sixteen outposts in Lakhimpur. In addition to the District jail at Dibrugarh, a subsidiary jail is maintained at North Lakhimpur, with accommodation for 30 male and 3 female prisoners.

Education.

As far as literacy is concerned, Lakhimpur is a little in advance of most of the Districts of the Assam Valley. The number of children at school in 1880-1, 1890-1, 1900-1, and 1903-4 was 2,271, 2,998, 5,501, and 5,219 respectively. The number of pupils in 1903-4 was nearly treble the number twenty-nine years before, but the proportion they bore to the total population was less than in the earlier year. This result is, however, largely due to the influx of illiterate coolies, and there can be little doubt that education has spread among the indigenous inhabitants. At the Census of 1901, 3·5 per cent. of the population (6·2 males and 0·5 females) were returned as able to read and write. In 1903-4 there were 166 primary, 9 secondary, and 2 special schools in the District. The number of female scholars was 143. A large majority of the pupils under instruction were only in primary classes, and the number of girls attending secondary schools was extremely small. Of the male population of school-going age 13 per cent. were in the

primary stage of instruction, and of the female population of the same age less than one per cent. The total expenditure on education in 1903-4 was Rs. 80,000, of which Rs. 13,000 was derived from fees. About 22 per cent. of the direct expenditure was devoted to primary schools.

Medical. The District possesses 2 hospitals and 6 dispensaries, with accommodation for 107 in-patients. In 1904 the number of cases treated was 72,000, of whom 1,200 were in-patients, and 1,100 operations were performed. The expenditure in the same year was Rs. 16,000, the greater part of which was met from Local and municipal funds.

Vaccination. In 1903-4, 39 per 1,000 of the population were successfully vaccinated, which was rather below the proportion for Assam as a whole. Vaccination is compulsory only in Dibrugarh town.

[Sir W. W. Hunter, *A Statistical Account of Assam*, vol. i (1879); A. Mackenzie, *History of the Relations of the Government with the Hill Tribes of the North-East Frontier of Bengal* (Calcutta, 1884); B. C. Allen, *District Gazetteer of Lakhimpur* (1905).]

Lakhimpur, North.—Subdivision of Lakhimpur District, Eastern Bengal and Assam, lying between 26° 49′ and 27° 33′ N. and 93° 46′ and 94° 41′ E., with an area of 1,275 square miles. On the north it is bounded by the Himālayas; on the south it is separated by the Subansirī and the Kherkutiā channel of the Brahmaputra from Sibsāgar District; on the west it adjoins Darrang. The population in 1901 was 84,824, or 34 per cent. more than in 1891 (63,434). Much of the country is covered with forest or high grass jungle, and in 1901 the density was only 67 persons per square mile. The subdivision contains 13 tea gardens, which in 1904 had 9,081 acres under plant and gave employment to 24 Europeans and 11,179 natives. The annual rainfall at North Lakhimpur village averages 128 inches, but close to the hills it is nearly 170 inches. The subdivision contains 323 villages. The head-quarters are situated at North Lakhimpur village, where there are a small jail, a hospital with 9 beds, and a bazar where a certain amount of trade is done with the tribes inhabiting the lower ranges of the Himālayas. Communications with the outer world are difficult, as the road to the Brahmaputra, which is more than 30 miles in length, is liable to be breached by flood. The demand for land revenue and cesses in 1903-4 amounted to Rs. 1,73,000.

Dibrugarh Subdivision.—Subdivision of Lakhimpur Dis-

trict, Eastern Bengal and Assam, lying between 27° 7′ and 27° 52′ N. and 94° 30′ and 96° 5′ E., at the eastern end of the Brahmaputra Valley, with an area of 3,254 square miles. The subdivision lies on both banks of the Brahmaputra and is surrounded on three sides by hills; but its boundaries on the north, south, and east have never been definitely determined. The population increased from 190,619 to 286,572, or by 50 per cent., between 1891 and 1901. This enormous increase was due partly to the natural growth of the indigenous inhabitants, but chiefly to the importation of large numbers of coolies to work on the tea plantations. In 1904 there were 130 gardens with 61,510 acres under plant, giving employment to 175 Europeans and 89,670 natives. The subdivision contains one town, DIBRUGARH (population, 11,227), the headquarters; and 800 villages. Round Dibrugarh the country is well peopled, the density over considerable areas exceeding 300 persons per square mile, but population falls off towards the hills, where dense forest is found, 300 square miles of which have been 'reserved.' Dibrugarh is well supplied with means of communication, as the Assam-Bengal Railway connects it with the sea at Chittagong, and another railway conveys the coal of Mārgheritā and the oil of Digboi to the Brahmaputra. The annual rainfall at different places in the subdivision varies from 95 to 112 inches. The demand for land revenue and cesses in 1903-4 amounted to Rs. 4,76,000.

Bomjur.—Frontier police outpost in Lakhimpur District, Eastern Bengal and Assam, situated in 28° 7′ N. and 95° 43′ E., on the left bank of the Dibāng river. The outpost is about 20 miles north of Sadiyā, and is connected with it by a road cut through dense tree forest, which has to be cleared for some little distance from the roadway for fear of ambuscades from the hill tribes. Bomjur is the most advanced point on the north-east frontier of the Indian Empire, and is situated among wild and magnificent scenery.

Brahmakund.—A deep pool in the Brahmaputra on the eastern border of Lakhimpur District, Eastern Bengal and Assam, situated in 27° 51′ N. and 96° 23′ E. Parasu Rāma, one of the ten incarnations of Vishnu, is said to have surrendered at this pool the axe with which he destroyed the Kshattriyas, and it is in consequence visited by Hindu pilgrims from every part of India. The pool is situated at the place where the river emerges from the mountains, and is surrounded on every side by hills. The journey from Sadiyā takes four or five days for ordinary travellers, but is not attended by

any risk. The return journey down stream can be completed in two days.

Chābuā.—Village in the Dibrugarh subdivision of Lakhimpur District, Eastern Bengal and Assam, situated in 27° 28′ N. and 95° 9′ E. It is a centre of the tea industry, and the market held every Sunday is attended by crowds of coolies from the gardens in the neighbourhood. At Dinjan, 3 miles to the north-east, there is a Vaishnav *sattra* or priestly college, which is held in great reverence by the Mataks, the indigenous inhabitants of those parts. Chābuā is situated near a station of the same name on the Dibru-Sadiyā Railway.

Dibrugarh Town.—Head-quarters of the District of Lakhimpur, Eastern Bengal and Assam, situated in 27° 28′ N. and 94° 55′ E., on the left bank of the Dibru river, a little above its confluence with the Brahmaputra, and on the trunk road. It is the terminus for steamers coming up the Brahmaputra from Calcutta, and for the Dibru-Sadiyā Railway which joins the Assam-Bengal Railway at Tinsukiā. Population (1901), 11,227.

Dibrugarh is one of the most desirable stations in the plains of Assam. On a clear day there is a charming view of the hills with which it is surrounded, and the heavy rainfall (112 inches) keeps the air cool without rendering it oppressive. It is the head-quarters of the District staff, of a battalion of military police, and of the Assam Valley Light Horse, 185 of whose members were resident in the District in 1904; while the regular garrison consists of the wing of a Native infantry regiment. The jail contains accommodation for 138 prisoners, who are employed chiefly on oil-pressing and bamboo- and cane-work. In addition to the usual public buildings, there are a church, a hospital with 98 beds, and a fort which was constructed at a time when the north-eastern frontier was still in an unsettled state. Dibrugarh was constituted a municipality under (Bengal) Act V of 1876 in 1878, and (Bengal) Act III of 1884 was introduced in 1887. The municipal receipts and expenditure during the ten years ending 1902–3 averaged Rs. 31,000. In 1903–4 the income was Rs. 51,000, the chief sources being a special grant (Rs. 27,000) from Provincial revenues, taxes on houses and lands (Rs. 5,400), and conservancy and market fees (Rs. 8,900); while the expenditure (Rs. 52,000) included conservancy (Rs. 14,800) and public works (Rs. 13,700). The receipts and expenditure of the cantonment fund in 1903–4 were Rs. 2,600 and Rs. 2,800 respectively. The town is the commercial centre of a District

which does not produce enough food to feed its foreign population. Large quantities of grain, oil, salt, piece-goods, and other stores are accordingly imported from Calcutta and distributed to various centres near the tea gardens. There are two stores under European management, which cater for the wants of the planter population, and a large number of native artisans are employed in the workshops of the railway company. Of recent years, the Dibru river has been cutting away the bank on which the bazar is situated, and the Mārwāri merchants, who retain in their hands almost all the wholesale trade, have been compelled to remove their shops farther inland. The town possesses a medical school and a high school. The average attendance at these two institutions in 1903-4 was 93 and 269 pupils respectively. There are four small printing presses in the town, at two of which a weekly newspaper is published in English.

Digboi.—Oil-field in the Dibrugarh subdivision of Lakhimpur District, Eastern Bengal and Assam, situated in 27° 23′ N. and 95° 37′ E. In its natural state the surface of the field is covered with dense tree forest which stretches for many miles in every direction. The first well sunk by the Assam Railways and Trading Company in 1888 yielded from 2,000 to 3,000 gallons a month. Thirty-one wells were subsequently drilled by the company referred to and by a private syndicate; but eleven were abandoned, as they yielded little or no oil. The works were taken over in 1899 by the Assam Oil Company, which was formed with a capital of £310,000. A large refinery was built at Digboi, which in 1903 gave employment to 10 Europeans and 569 natives, the output in that year consisting of 1,200,000 gallons of kerosene and 89,000 gallons of other oil, with 573 tons of wax and 63 tons of candles. The wells vary in depth from 600 to 1,800 feet, and the most productive well, which has a depth of 1,250 feet, is said to yield 50,000 gallons a month. The oil is forced up to the surface by the pressure of the natural gas. Digboi is situated on the Mākum branch of the Dibru-Sadiyā Railway.

Dum Dumā.—Village in the Dibrugarh subdivision of Lakhimpur District, Eastern Bengal and Assam, situated in 27° 34′ N. and 95° 33′ E. It is one of the most important centres of the tea industry in Assam, and the market held every Sunday is the largest in the District. A police station is located in the remains of an old fort formerly erected for the purpose of frontier defence.

Jaipur.—Village in the Dibrugarh subdivision of Lakhimpur

District, Eastern Bengal and Assam, situated in 27° 16′ N. and 95° 23′ E., on the left bank of the Burhi Dihing river. There are deposits of coal and oil-bearing strata in the neighbourhood, and the place is a centre of local trade.

Mārgheritā.—Village in the Dibrugarh subdivision of Lakhimpur District, Eastern Bengal and Assam, situated in 27° 17′ N. and 95° 47′ E., on the left bank of the Burhi Dihing river. Mārgheritā lies at the foot of the Pātkai range, and is surrounded on every side by forest. The village owes its prosperity to the coal-mines in the neighbourhood. The coal measures consist of beds of alternating shales, coal, and sandstones, and are known as the Mākum field. Five mines have been opened—the Tikāk, Upper Ledo, Ledo Valley, Tirāp, and Namdang—which in 1903 gave employment to 1,200 coolies working under 9 Europeans. The output in that year was 239,000 tons. The coal is on the whole fairly hard and compact, but after extraction and exposure to the air it breaks up into small pieces. Mining is conducted on the 'square or panel' system, a modification of the system known in England as 'pillar and stall.' Mārgheritā is connected with Dibrugarh by the Dibru-Sadiyā Railway, which crosses the Dihing river by a fine bridge. The Coal Company has opened a large pottery, in which bricks, pipes, and tiles are made. A police station and stockade are held by military police in the vicinity. The weekly market is much frequented by the hill tribes, who bring down rubber, amber, wax, and vegetables.

Sadiyā.—Village in the Dibrugarh subdivision of Lakhimpur District, Eastern Bengal and Assam, situated in 27° 48′ N. and 95° 39′ E., on the right bank of the Brahmaputra river. Sadiyā is the extreme north-east frontier station of British India, and stands on a high grassy plain from which on a clear day a magnificent view is obtained of the hills which surround it on three sides. It is garrisoned by detachments of Native infantry and military police. In the neighbourhood are the ruins of extensive forts, which are said to have been built by Hindu Rājās who preceded the Chutiyās in the sovereignty of the country. A little to the east are the remains of the famous copper temple, at which human sacrifices used at one time to be offered by the Chutiyās, and which was a centre of worship for the tribes on the north-east frontier. In 1839 the Khamtis rose in rebellion and killed the garrison and Colonel White, the officer in charge; and since that day Sadiyā has been the base of a chain of outposts stretching towards the north and east. It is the head-quarters of an officer whose particular

duty is to extend his influence over the hill tribes and to keep a watch upon their movements. There is a considerable market, at which the hillmen exchange rubber, wax, musk, ivory, and other hill produce for cotton cloth, salt, metal utensils, jewellery, and opium.

Tinsukiā.—Village in the Dibrugarh subdivision of Lakhimpur District, Eastern Bengal and Assam, situated in 27° 29′ N. and 95° 21′ E. It contains a dispensary, and the weekly market is attended by large numbers of coolies from the tea gardens in the neighbourhood. Tinsukiā is rapidly increasing in importance, as it is the junction of the Assam-Bengal and Dibru-Sadiyā Railways.

NATIVE STATES

Hill Tippera (*Tripurā*).—Native State in Eastern Bengal and Assam, lying between 22° 56′ and 24° 32′ N. and 91° 10′ and 92° 22′ E., with an area of 4,086 square miles. It is bounded on the north by the District of Sylhet; on the west by Tippera District and Noākhāli; on the south by Noākhāli, Chittagong, and the Chittagong Hill Tracts; and on the east by the Lushai Hills and the Chittagong Hill Tracts.

Boundaries, configuration, and hill and river systems.

The lie of the country is similar to that of the Chittagong Hill Tracts. Six principal ranges of hills, increasing in height towards the east, run north and south, with an average interval of 12 miles. The hills are clothed for the most part with bamboo jungle, while the low ground is well timbered and covered with cane-brakes and thatching-grass. Along the north-western and southern boundaries of the State lies a narrow strip of low land, differing in no material respect as regards soil, agriculture, and population from the adjoining portions of Sylhet, Tippera, Noākhāli, and Chittagong Districts. Along the western border, for some miles to the north and south of the capital, the country may be described as broken ground, consisting of hillocks alternating with marshy valleys. These hillocks are utilized as sites for homesteads, and the valleys have been converted into rice-fields.

The principal hill ranges, beginning from the east, are the Jāmpai (highest points, Betling Sīb, 3,200 feet, and Jāmpai, 1,860 feet), Sakhantlang (highest point, Sakhan, 2,578 feet), Langtarai (highest point, Phengpuī, 1,581 feet), and Athāramura (highest points, Jārimura, 1,500 feet, and Athāramura, 1,431 feet). These hills form a watershed from which the drainage pours down north by the Khowai, Dolai, Manu, Jūri, and Langai, west into the Meghnā by the Gumtī, and south-west into the Bay of Bengal by the Fenny and Muharī. All of these rivers are navigable by boats of 4 tons burden during the rains, and by boats of 2 tons burden in the dry season. The Muharī, with its tributary the Seloniā, and the Fenny are tidal rivers. Near the source of the Gumtī is a waterfall, known as the Dumbura fall; the scenery in its neighbourhood is exceedingly picturesque.

So far as is known, the rock formation is Upper Tertiary;

Geology, botany, and fauna.

the plains are covered by recent alluvial deposits. The hills are clothed, in the south, with a forest very similar in appearance and composition to that of Chittagong; and *Laurineae*, *Dipterocarpeae*, *Ternstroemiaceae*, *Euphorbiaceae*, and *Leguminosae* are well represented. The north is drier and densely covered by bamboo jungle. The thick forests which clothe the hills shelter wild elephants, rhinoceros, tigers, and bears; pythons are common and are eaten by the Lushais.

Temperature and rainfall.

The climate is healthy and the temperature moderate. The annual rainfall averages 76 inches, of which 5 inches fall in April, 11 in May, 15 in June, 12 in July, 11 in August, and 10 in September.

The earthquake of 1897 destroyed many buildings and shrines in Agartalā, and raised the beds of several rivers, notably of the Manu.

History.

The origin of the name Tripurā is uncertain. A mythical account of the ancient history of the State is contained in the *Rājmāla*, or Chronicles of the Kings, which was commenced in the fifteenth century; it was written in Bengali verse by Brāhman *pandits* attached to the court. The Rājā claims descent from Druhyu, son of Yayāti, of the Lunar race. The chief points of interest contained in these chronicles are that the State was ever at feud with its neighbours, and that Siva worship took early root and was associated with the practice of human sacrifice. The ancient kingdom of Tippera at various times extended its rule from the Sundarbans in the west to Burma in the east, and northwards as far as Kāmrūp. The State was first overrun by the Muhammadans under Tughril in 1279, and was again invaded by Ilyās Shāh in the middle of the fourteenth century, and by Fateh Jang in 1620. The plains portion (the present British District of Tippera) was not, however, annexed to the Mughal empire until 1733. Hill Tippera proper was never assessed to revenue and remained outside the sphere of Muhammadan administration, although influence was usually exercised in the appointment of the Rājās. The military prestige of the Tippera Rājās was at its height during the sixteenth century, when Bijoy Mānikhya defeated the Muhammadan troops who defended Chittagong, and occupied parts of Sylhet and Noākhāli.

After the East India Company obtained the *dīwāni* of Bengal in 1765 they placed a Rājā on the throne, and since 1808 each successive ruler has received investiture from the Government. In 1838 it was held by the Deputy-Governor of Bengal that, owing to his unchallenged possession from at

least 1793, the Rājā had obtained a prescriptive right to the territory within the hills. Between 1826 and 1862 the eastern portion of the State was constantly disturbed by Kūki raids, in which villages were burned and plundered, and the peaceful inhabitants massacred. An account of the action taken by the British Government to put an end to these raids will be found in the article on the LUSHAI HILLS.

The present chief is Rājā Rādhā Kishore Deb Barman Mānikhya, who was invested in 1897. The title of Mānikhya, which is still borne by the Rājās, was bestowed first on Rājā Ratnaphā, by the Muhammadan king of Gaur, about 1279. The Rājā receives a salute of 13 guns.

Political constitution.

Both as regards its constitution and its relations with the British Government, the State of Hill Tippera differs alike from the large Native States of India, and from those which are classed as tributary. Besides being the ruler of Hill Tippera, the Rājā also holds a large landed property called CHAKLA ROSHNĀBĀD, situated in the plains of the Districts of Tippera, Noākhāli, and Sylhet. This estate covers an area of 570 square miles, and is the most valuable portion of the Rājā's possessions; it yields a larger revenue than the whole of Hill Tippera, and it is held to form with the State an indivisible Rāj. Disputes as to the right of succession have occurred on the occasion of almost every vacancy in the Rāj, producing in times gone by disturbances and domestic wars, and exposing the inhabitants of the hills to serious disorders and attacks from the Kūkis, who were always called in as auxiliaries by one or other of the contending parties. The principles which govern succession to the State have recently, however, been embodied in a *sanad* which was drawn up in 1904. This lays down that the chiefship is hereditary in the Deb Barman family, and that the chief may nominate any male member of his family descended through males from him or any of his male ancestors to be his Jubrāj or successor. Should the ruling chief die without nominating his successor, his nearest male descendant through males according to the rule of lineal primogeniture is to succeed to the chiefship, and, failing such descendant, his nearest male heir descended from any male ancestor. Finally, every succession to the chiefship requires as heretofore the recognition of the Government of India.

In 1871 an English officer was first appointed as Political Agent to protect British interests and to advise the Rājā. In 1878 his post was abolished, and the Magistrate of the adjoining District of Tippera was appointed *ex-officio* Political Agent

of Hill Tippera, a Bengali Deputy-Magistrate being stationed at Agartalā as Assistant Political Agent; ultimately, in 1890 this latter post was abolished.

The people.

The population in 1901 was 173,325, which gives a density of 42 persons to the square mile; the hills can support only a scanty population. The people live in one town, AGARTALĀ, and 1,463 villages. The recorded population increased from 35,262 in 1872 to 95,637 in 1881, and 137,442 in 1891; but the first two enumerations were probably inaccurate. The increase of 26 per cent. in 1901 was due mainly to the growing immigration from the neighbouring Districts, 44,000 immigrants having been enumerated in 1901. The same reason explains the deficiency of females, there being only 874 to every 1,000 males. Of the population 44 per cent. speak Tippera or Mrung, a dialect of the Bodo family, of which Kachārī and Gāro are the other most important representatives, and 40 per cent. Bengali; many of the remainder speak languages of the Kūki-Chin group, such as Manipurī and Hallām. Hindus formed 69 per cent. of the inhabitants, Musalmāns 26 per cent., Buddhists 3 per cent., and Animists less than 2 per cent.

Castes and occupations.

The Tipperas are a Mongolian race, and appear to be identical with the Mrungs of Arakan. Outside the State and Tippera District they are found in large numbers only in the Chittagong Hill Tracts. In Hill Tippera they number 76,000, and are divided into Purān or original Tipperas, and Jāmātias, the fighting caste. There are two other divisions which are not regarded as true Tipperas: the Nawātiās, who are said to have come from Chittagong; and the Riyāngs, who are of Kūki origin and were formerly the *pālki*-bearers of the Tippera Rājās. Although the religion of the tribe is returned as Hindu, it is a curious mixture of Hinduism and Animism; the old tribal gods have not yet been ousted, and they are worshipped side by side with those of the Hindus by tribal priests called Ojhas. A list of the deities worshipped will be found on pp. 186 and 187 of the *Census Report*, 1901. The family gods of the Tippera kings are known as the *chaudah devātā*, or 'fourteen gods'; and they include Tuimā, a river goddess, Lāmpra, the god who rules the sky and ocean, and Burāsa, the forest god, the remainder being Hindu deities. Goats and buffaloes are sacrificed at their shrines, and in former times human beings were immolated. The marriage customs of the hill tribes are primitive. When a young man wishes to marry a girl, he serves for one to three years in her father's house. Infant marriage is rare, and divorce and the remarriage of widows are allowed. The dead are

cremated. The other castes are immigrant Manipuris, and Kūkis and Chakmās from the Chittagong Hill Tracts. Agriculture supports 91 per cent. of the population, and industries 3 per cent.

Agriculture. The nomadic cultivation known as *jhūm* is almost universal, except in the narrow strip of plain which adjoins British territory. The forest on a hill-side is cut, and burnt when it has dried; and as soon as the rains break, seeds of various crops are sown in holes made for the purpose. No agricultural statistics are available; but the principal crop and main food-staple is rice, both in the plains and in the hills. Other crops grown in the plains are jute, tobacco, sugar-cane, mustard, chillies, and onions; and in the hills cotton, chillies, and sesamum. Attempts have been made of late years to induce the Tipperas to resort to plough cultivation, and a few agricultural banks have been established by the State; a model farm has also been started. The breeds of buffaloes are known as Manipuri and Bangar; the former are the stronger. Pasturage is abundant.

Forests. The forest which covers the hills contains *sāl* (*Shorea robusta*), *tūn* (*Cedrela Toona*), *gamhār* (*Gmelina arborea*), *jārul* (*Lagerstroemia Flos Reginae*), and *gurjan* (*Dipterocarpus turbinatus*), besides large quantities of bamboos and canes. The timber and other produce are floated down the rivers, and the wood is largely used for boat-building; the export duty on forest produce yields over 2 lakhs annually to the State. An area of 15 square miles of forest has been 'reserved,' in which teak, mahogany, *sissū* (*Dalbergia Sissoo*), rubber, and mulberry are being cultivated.

Manufactures and commerce. The only manufacture is cotton cloth of the coarsest quality made by the Manipuri and Tippera women. The principal exports are cotton, timber, sesamum, bamboos, canes, thatching-grass, and firewood; an export duty is levied on all these articles. The imports are salt, kerosene oil, tobacco, and European piece-goods. The chief trade centres are AGARTALĀ, Khowai, Kailāshahar, UDAIPUR, Bisālgarh, and Mohanpur; business is chiefly in the hands of Hindu Sāhās. At some of these centres annual fairs are held, at which merchants from the neighbouring British Districts assemble and the hill people make their annual purchases.

Means of communication. Traffic is carried on chiefly by water; in the dry season, when the rivers are not navigable by boats of more than 2 tons burden, rafts and canoes are used. There are 105 miles of roads, mainly in the neighbourhood of Agartalā; feeder-roads

are now under construction to the stations on the Assam-Bengal Railway, which passes outside the western boundary of the State.

Administration. The administration is conducted by the Minister at Agartalā, assisted by the *dīwān* and other subordinates. The laws are framed by a legislative council, and are modelled on the laws of British India. The State is divided into seven administrative divisions—Agartalā, Udaipur, Sonāmurā, Beloniā, Khowai, Dharmanagar, and Kailāshahar—each presided over by an officer ordinarily styled Magistrate-Collector, whose duties correspond to those of a District officer in British non-regulation Districts; he is subordinate to the Minister except in judicial matters. The chief judicial authority is vested in the *Khās* appellate court, which is presided over by three Judges and is similar in constitution to a Chief Court in British Provinces. Subordinate to the *Khās* appellate court is a court, presided over by a Judge, which hears all civil and criminal appeals from the divisional officers and tries Sessions cases. The officials are mainly natives of Bengal, many of them graduates of the Calcutta University; but certain offices are held exclusively by the Thākurs who are connected with the Rājā by marriage or otherwise. AGARTALĀ is the only municipality.

Revenue. The State revenue increased from 2.4 lakhs in 1881–2 to 4.6 lakhs in 1892–3 and 8.17 lakhs in 1903–4, of which 2.32 lakhs was derived from land revenue. Duties are levied on exports, such as cotton, *til*, and forest products, bringing in 2.78 lakhs in 1903–4. The income derived from elephant-catching is decreasing, as these animals are becoming scarce.

The Rājā is the proprietor of the soil, and the land is held either direct by cultivators or under *taluka* grants, which may be either perpetual or temporary. In the hills a family tax is realized from *jhūm* cultivators, and rents are paid only for lands in the plains; the rates vary from 12 annas to Rs. 9–8, the average being Rs. 3 per acre. The State is being cadastrally surveyed and settled.

Police and jails. A military force of 330 officers and men is maintained by the State. The force under the Superintendent of police numbers 8 inspectors, 26 *dārogas*, 33 *naib-dārogas*, 40 head constables, 49 writer constables, and 308 constables, posted at 22 police stations and 34 outposts. There is a jail at Agartalā and a lock-up at each of the divisional head-quarters; the average daily number of prisoners in 1903–4 was 47.

Education. Education is very backward, and in 1901 only 2.3 per cent. of the population (4.1 males and 0.2 females) could read and write.

The number of pupils under instruction increased from 619 in 1881 to 1,059 in 1892–3 and 1,704 in 1900–1; and 3,008 boys and 117 girls were at school in 1903–4. The number of educational institutions in that year was 103: namely, an Arts college, a secondary school, 99 primary schools, and 2 special schools. Of the primary schools, 88 are in the hills, and special scholarships have been founded for hill boys. An artisan school has recently been started, in which carpentry and brass- and ironwork are taught. There are boarding-houses at the college and high school, where accommodation and medical aid are provided free of cost. A special boarding-house has also been established for the Thākur boys, and in connexion with it a class has been opened for the training of such Thākurs as are willing to enter the civil service of the State; separate arrangements have also been made for the education of members of the ruling family. The expenditure on education in 1903–4 amounted to Rs. 70,000, which was entirely borne by the State, all education being free.

The State maintains 10 charitable dispensaries, under the control and supervision of the State physician. The total number of out-patients in 1903–4 was 35,269, and of in-patients 657; 401 operations were performed. The expenditure was Rs. 26,500, entirely borne by the State. Medical.

Vaccination is not compulsory, but is making progress, and 7,756 persons were vaccinated in 1903–4. Vaccination.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. vi; Sir A. Mackenzie, *History of the Relations of the Government with the Hill Tribes of the North-East Frontier of Bengal* (Calcutta, 1884); Rev. James Long, 'Abstract of the Rājmāla,' *Journal of the Asiatic Society of Bengal* (1850), vol. xix, p. 533; J. G. Cumming, *Settlement Report of Chakla Roshnābād* (Calcutta, 1899).]

Agartalā.—Capital of Hill Tippera State, Eastern Bengal and Assam, and the residence of the Rājā, situated in 23° 51′ N. and 91° 21′ E. Population (1901), 9,513. The old town is built on the left bank, and the new town on the right bank of the Haora river. Near the palace in the old town is a small temple much venerated by the Tipperas, which contains fourteen heads wrought in gold and other metals, which represent their tutelary deities. A municipality was constituted in 1874–5. The income during the decade ending 1901 averaged Rs. 1,100, and the expenditure Rs. 3,800. In 1903–4 the total income, including grants, was Rs. 6,700, of which Rs. 720 was derived from a municipal tax; and the expenditure was Rs. 7,400.

The town possesses an Arts college, an artisan school, a Sanskrit *tol*, a dispensary, and a jail.

Udaipur Village.—Head-quarters of the division of the same name in the State of Hill Tippera, Eastern Bengal and Assam, situated in 23° 31′ N. and 91° 29′ E. It is the old capital of the State, and abounds in ruins and possesses enormous tanks now overgrown with jungle. The temple of Tripureswarī is, with one exception, the most important in this part of Eastern Bengal, and is visited by thousands of pilgrims from all parts of the Province. It dates from the beginning of the sixteenth century.

Boundaries, configuration, and hill and river systems.

Manipur.—Native State lying to the east of the Province of Eastern Bengal and Assam, between 23° 50′ and 25° 41′ N. and 93° 2′ and 94° 47′ E., with an area of 8,456 square miles. It is bounded on the north by the Nāgā Hills District and by hilly country inhabited by tribes of independent Nāgās; on the east by independent territory and Burma; on the south by Burma and the Lushai Hills; and on the west by the District of Cāchār. The State consists of a great tract of hilly country, with a valley about 30 miles long and 20 miles wide, shut in on every side. The general direction of these ranges is north and south, but in places they are connected by spurs and occasional ridges of lower elevation. The greatest altitude is reached to the north-east, about fifteen days' journey from the Manipur valley, where peaks rise upwards of 13,000 feet above sea-level. To the north of this the hills gradually decrease in height till they sink into the flat plains of the Assam Valley. Southwards, too, there is a gradual decline in altitude till the sea is reached near Chittagong and Arakan. The general appearance of the hill ranges is that of irregular ridges, occasionally rising into conical peaks and flattened ridges of bare rocks. Sometimes, as in the western ranges of hills overlooking the Manipur valley, the summit of the hills presents a more open and rolling character.

The journey through the hills from Cāchār to Manipur is one of great interest. The path crosses five considerable ranges, covered with forest and separated from one another by deep river valleys, and thus possesses all the attractions which are conferred by stately timber, luxuriant undergrowth of bamboos, creepers, and giant ferns, bold cliffs, and rivers rushing through wild gorges. The general appearance of the valley, as the traveller descends from the hills, has much to please the eye. On every side it is shut in by blue mountains. To the south the waters of the Loktak Lake sparkle in the sun, and all the

country in the neighbourhood is covered with waving jungle grass. Farther east the villages of the Manipuris are to be seen buried in clumps of bamboos and fruit trees, and lining the banks of the rivers that meander through the plain. The jungle gives way to wide stretches of rice cultivation, interspersed with grazing grounds and swamps, and to the north-east are the dense groves which conceal the town of Imphal.

The principal rivers of the valley are the Imphal, Iril, Thobal, Nambal, and Nambol. The last-named river falls into the Loktak Lake, from which it emerges under the name of Kortak. This stream eventually joins the Imphal and the Nambal, and their united waters, which are known as the Achauba, Imphal, or Manipur river, finally fall into the Kendat and thus into the Chindwin. The chief rivers crossed in the hills by the traveller from Cāchār are the Jiri, the Makru, the Barāk, the Irang, the Lengba, and the Laimatak. The Jiri, which forms the boundary between British territory and Manipur, is about 40 yards wide where it is crossed by the Government road, and is fordable in the dry season. The Makru, which runs parallel with the Jiri, has a very clear stream, and is also fordable in the dry season. The Barāk is the largest and most important river in the Manipur hill territory; it receives the Makru, the Irang, the Tipai, which flows north from the Lushai country, and finally the Jiri. It is said to be navigable for canoes for about one day above its junction with the Tipai. The rivers in the plains are navigable by dug-out canoes at all seasons of the year. It was at one time thought that the Manipur valley originally consisted of a large lake basin, which gradually contracted in size until nothing remains but the Loktak, a sheet of water about 8 miles long and 5 miles wide, which occupies the south-eastern corner of the valley. Further investigations by competent geologists have shown that this hypothesis is not correct.

The soil of the valley is an alluvial clay washed down from the surrounding hills. The mountains to the north are largely composed of Pre-Tertiary slates and sandstones, with Upper Tertiary deposits on the higher ridges and on the hills overhanging the Chindwin valley. Geology.

The inner hills are clothed with forest, but the slopes of the Laimatol range, which overlook the valley on the west, are covered only with grass. In the valley itself there is little tree growth. A great portion of the plain is cultivated with rice, but near the Loktak Lake there are wide stretches of grass jungle. Botany.

Fauna. Wild animals are fairly common, including elephants, tigers, leopards, bears, deer, and wild hog. Rhinoceros and bison (*Bos gaurus*) are also found in the hills to the south-east, but are not common; and serow or goat antelopes are occasionally met with on the higher ranges. Leopards, hog, and deer are the only animals to be seen in large numbers n the plains. Elephants used at one time to be regularly hunted, but the herds have been considerably reduced in numbers, and these operations are no longer profitable. Large flocks of wild geese and ducks are to be found on the Loktak Lake, and partridges, pheasants, and jungle-fowl are common.

Climate and rainfall. The valley lies about 2,500 feet above the level of the sea, and the climate is cool and pleasant. At the hottest season the nights and mornings are always cool. In the winter there are sharp frosts at night, and heavy fogs often hang over the valley till the day is well advanced. The annual rainfall at Imphal town averages about 70 inches; in the hills it is believed to be as much as 100 inches.

Manipur, like the neighbouring province of Assam, is subject to seismic disturbances. A severe shock occurred in 1869; but the earthquake of 1897, which did so much damage in other parts of Eastern India, was only slightly felt.

History. The origin of the Manipuri people is obscure, and the written records, having been mainly composed since they became Hindus, are not worthy of credit. From the most trustworthy traditions, the valley appears originally to have been occupied by several tribes, which came from different directions. Although the general facial characteristics of the Manipuris are Mongolian, there is great diversity of feature among them, some showing a regularity approaching the Aryan type. The kingdom of Manipur first emerges from obscurity as a neighbour and ally of the Shan kingdom of Pong, which had its capital at Mogaung. The regalia of the royal family are said to have been bestowed by king Komba of Pong. The history of Manipur contains nothing of special interest until about A.D. 1714. In that year a Nāgā named Pānheiba became Rājā of Manipur, and adopted Hinduism, taking the name of Gharīb Nawāz. His people followed his example, and since that date have been conspicuous for the rigidity with which they observe the rules of caste and ceremonial purity.

Gharīb Nawāz made several successful invasions into Burma, but no permanent conquest. After his death, the Burmans invaded Manipur; and the ruler, Jai Singh, having sought the

aid of the British, a treaty of alliance was negotiated in 1762. The force sent to assist Manipur was, however, recalled, and after this little communication passed between the British Government and the State for some years. On the outbreak of the first Burmese War in 1824, the Burmans invaded Cāchār and Assam, as well as Manipur; and Gambhīr Singh of Manipur asked for British aid, which was granted. A force of sepoys and artillery being sent towards Cāchār, and a levy of Manipuris being formed under British officers, not only were the Burmans expelled from the Manipur valley, but the Kubo valley down to the Ningthi river, situated to the east of the old boundaries, and peopled by Shans, was added to the State. In 1826 peace was concluded with Burma, and Manipur was declared independent. Until 1834, when Gambhīr Singh died, the country remained quiet and prosperous. On his death, his son being at the time only one year old, Nar Singh, his uncle and great-grandson of Gharīb Nawāz, was appointed regent. In 1834 the British Government decided to restore the Kubo valley to Burma, the government of which had never ceased to remonstrate against its separation from that country. The valley was given back, and a new boundary laid down by an agreement dated January 9, 1834. The British Government at the same time bound itself to pay to the Rājā of Manipur an annual allowance of Rs. 6,370, in compensation for the loss of the Kubo valley. In 1835 a Political Agent was appointed to act as a medium of communication between the State and the British Government.

An unsuccessful attempt was made on Nar Singh's life in 1844, and the Rājā's mother, being implicated, fled with her son, Chandra Kīrtti Singh, to Cāchār. Nar Singh upon this assumed the throne, which he retained until his death in 1850. Debendra Singh, his brother, was then recognized as Rājā by the British Government. Three months afterwards, Chandra Kīrtti Singh invaded Manipur, and Debendra Singh, who was unpopular, fled towards Cāchār. Chandra Kīrtti Singh, having established his authority, was in February, 1851, recognized by the British Government; and though numerous attempts were made by other members of the royal family to head a rebellion, the leaders were all defeated, and either killed, imprisoned, or placed under surveillance in British territory. In 1879, when the Angāmī Nāgās killed Mr. Damant, the Deputy-Commissioner of the Nāgā Hills, and besieged the stockade at Kohīmā, the Mahārājā dispatched a force under Colonel Johnstone, the Political Agent, who raised the siege. In recognition

of this service, the Government of India bestowed upon the Mahārājā the dignity of K.C.S.I. During the Burmese War of 1885, which ended in the annexation of king Thībaw's dominions, a small force under Colonel Johnstone succeeded in rescuing a number of British subjects and Europeans in Northern Burma. In the course of these operations the Political Agent was seriously wounded, and compelled to take leave; and his successor, Major Trotter, was shortly afterwards treacherously attacked near Tammu, and received a wound which caused his death two months later.

In 1886 Chandra Kīrtti Singh died, and was succeeded by his son, Sūr Chandra Singh. As on previous occasions, a series of attempts were made by other claimants to the throne to oust the lawful heir. The first two expeditions were led by Bora Chaoba Singh, a son of the Nar Singh who ruled Manipur from 1844 to 1850, but proved unsuccessful. Two more attempts were made in 1887, but the pretenders were defeated and killed and their followers dispersed. In September, 1890, two of the Mahārājā's brothers attacked the palace, and Sūr Chandra Singh fled to the Residency for protection. He then announced his intention of resigning the throne, and left Manipur for Cāchār *en route* for Brindāban. His younger brother, Kula Chandra Singh, proclaimed himself Mahārājā, though the real power seems to have lain in the hands of his brother Tikendrajīt Singh, who was Senāpati, or commander-in-chief of the Manipur forces.

On reaching British territory, Sūr Chandra Singh repudiated his abdication, and applied for help. It was decided that the Jubrāj, Kula Chandra Singh, should be recognized as Mahārājā, but that the Senāpati should be removed from the State and punished for his lawless conduct; and the Chief Commissioner, Mr. Quinton, was directed to visit Manipur early in March, 1891, to give effect to these orders. He was accompanied by an escort of 400 men from two Gurkha battalions, which, in addition to the Political Agent's guard of 100 men, was thought sufficient to check any attempt at opposition. After much deliberation, the Chief Commissioner determined to hold a *darbār*, at which the orders of the Government of India were to be announced and the Senāpati arrested. The latter, however, refused to appear, and it was decided to arrest him on March 24. Troops were accordingly sent to his house, but were attacked, and Lieutenant Brackenbury, one of the officers in command, was killed. Fighting went on throughout the day, but at evening an armistice was agreed to and the Senāpati

invited the Chief Commissioner to meet him. Mr. Quinton, accompanied by other British officers, proceeded to the rendezvous and then into the fort, where they met the Senāpati, but no agreement was concluded. As the party were leaving, their way was barred, Mr. Grimwood, the Political Agent, was speared, and Lieutenant Simpson severely wounded. Mr. Quinton and the officers with him were detained for two hours, and were then marched out to an open space, and beheaded by the public executioner. The attack upon the Residency was renewed, but after a short interval the British force drew off towards Cāchār, which they reached without serious misadventure. The Superintendent of Telegraphs, Mr. Melvill, who had left Imphal for Kohīmā before the outbreak, was pursued by the Manipuris, and both he and a European signaller who accompanied him were killed.

As soon as news of the disaster was received at Kohīmā, the Deputy-Commissioner marched down the road to the Manipur boundary and drove back the rebels. Lieutenant Grant also advanced from Tammu with 80 men to within 14 miles of the capital, but was unable to proceed farther and was recalled. Three British columns entered the State from Burma, Cāchār, and the Nāgā Hills, and arrived before the palace on April 27, to find that the Jubrāj and the Senāpati had taken flight. They were, however, captured; and the Senāpati and several of the actual murderers were tried and hanged, while Kula Chandra Singh and the other ringleaders were deported to the Andamans. Chura Chand, a boy belonging to a collateral branch of the royal house, was then placed on the *gaddi*. During his minority the State has been administered by the Political Agent, and numerous reforms have been introduced. In 1907 the young Mahārājā, who had been educated at the Ajmer College, was formally installed.

The disturbances of 1891 led to an outbreak of lawlessness among the hill tribes subject to Manipur. No less than eight raids were committed by various villages on one another within the year, in the course of which 104 lives were lost. Murders along the road running from Manipur to Kohīmā were common; and in 1893 the Nāgā village of Swemi was raided by Kūkis, who professed to have been incensed at the failure of the Nāgās to compensate a Kūki chief for an alleged theft of rice. The attack was delivered at dawn, and 99 men and 187 women and children were put to the sword. In 1901 the State was visited by Lord Curzon as Viceroy, on his way from Cāchār to Burma.

The people.

The first Census of Manipur, which was taken in 1881, disclosed a population of 221,070. The census papers of 1891 were destroyed in the rising that took place in that year. The population in 1901 was 284,465, giving a density of 34 persons per square mile. The whole of this increase was due to natural growth, there being practically no immigration into the State. Women exceed men in numbers. They enjoy a position of considerable importance, and most of the trade of the valley is in their hands. Of the population in 1901, 60 per cent. were Hindus, and 36 per cent. aboriginal tribes still faithful to their own primitive forms of belief. Muhammadans formed nearly 4 per cent. of the whole. Manipurī is the ordinary language of the valley, and was returned by 64 per cent. of the population; but in the hills Nāgā (21 per cent.) and Kūkī (14 per cent.) are the common forms of speech. The State contains one town, IMPHAL (population, 67,093), and 467 villages.

Castes and occupations.

The mass of the Hindu population describe themselves as members of the Kshattriya caste (161,000), though the Manipuris have been converted within comparatively recent times to Hinduism; of the remainder the majority are Brāhmans.

The hill tribes fall into two main sections, Kūkis and Nāgās. Kūki is a generic term applied to tribes whose home is in the mountainous tract lying between Burma, Manipur, Cāchār, and Arakan. These tribes have been steadily moving northwards, and have crossed the Cāchār and Manipur valleys and settled in the hills beyond. The total number of Kūkis in the State in 1901 was 41,000. The hills that surround the valley are inhabited by various tribes of Nāgās (59,000), of whom the Tankuls (20,000) are the best known. The men of this tribe, when working in the fields or on the roads, are often stark naked except for a small bone ring, through which the foreskin is drawn. Other Nāgā tribes are the Kabui, Koirao, and Maring. The Lois are a low caste, not even dignified by the name of Hindu. They are probably descended from one of the hill tribes, but under native rule the degradation of a Hindu Manipuri to the class of Loi was a not uncommon form of punishment. Agriculture is the main occupation of the people.

Agriculture.

The soil of the valley is a reddish clay of considerable depth, which is enriched every year by deposits of silt from the rivers, and yields luxuriant crops of rice. The system of cultivation does not differ materially from that followed in the plains of Assam. The staple crop is rice, of which there are

two main kinds: one sown on high land in March or April and cut in July or August; and the other sown in April to June, transplanted about two months later into beds of liquid mud, and reaped in December. Most of the rice grown belongs to the second, or transplanted variety. Other crops include mustard and sugar-cane, which do extremely well, pulses of various kinds, and tobacco. The poppy is cultivated to a small extent by Muhammadans. English vegetables are grown in the cold season, and oats and wheat have been tried with success. Fruit trees include oranges, limes, pineapples, plantains, jack-fruit, and mangoes. The last are injured by the worm, which ruins this fruit also in Assam. Various kinds of English fruit trees have been tried, but have not proved successful. The areca-palm does not grow in Manipur, and large quantities of the nuts are, in consequence, imported from Cāchār. The rainfall renders any general system of irrigation unnecessary, but when the rivers rise small channels are often cut to bring water to the fields.

Most of the hill tribes practise the *jhūm* system of cultivation. Jungle is cut down and burned, and seeds are sown among the ashes. The crops thus grown include hill rice, cotton, pulses, pepper, tobacco, ginger, vegetables of various kinds, potatoes, and maize. The same *jhūm* is seldom cropped for more than two years in succession, and is then allowed to lie fallow for as long a time as possible, the minimum period of rest being four years. The Tankul Nāgās, who live in the hills east of the valley, grow transplanted rice. The sides of the hills are cut out into a succession of terraces, built up with stone retaining walls, over which the water from the hill streams is distributed through small irrigation channels. It is from this tribe that the Angāmī Nāgās are said to have learned the art of terracing the hill-sides. The advantages of the system are twofold. It enables the villagers to obtain their supplies from fields close to their own homes, while the grain raised is of a better quality than that grown in the *jhūms*. Hill cultivation.

It is impossible to trace the extension of cultivation, as an accurate system of land measurement has only recently been introduced. A strong stimulus has, however, been given to agriculture by the construction of the cart-road through the hills to the Assam Valley, and by the completion of the railway line from Gauhāti to Dimāpur; and there is now a large export of rice along this route.

The cattle are strong, hardy little animals, and when Cattle, &c.

abundance of excellent grazing in the rich grass of the *jhīls*, and the live stock of the farm are carefully tended by their owners. The cows, like those of Assam, are poor milkers. The buffaloes are much superior to those imported into the Surmā Valley from Bengal. The Manipuri ponies are well-known. They do not, as a rule, stand as much as 12 hands high, but they have remarkable endurance, courage, and speed. Unfortunately, the mares have been recklessly sold, and many were carried away after the expedition of 1891. Good ponies in consequence are now very scarce, and there is serious risk of the breed disappearing. In 1839 an Arab stallion and 8 mares were supplied to the Rājā, but the climate did not suit them and their progeny soon died out.

Forests. The whole of the hill ranges lying between the valleys of Cāchār and Manipur, and far to the north and south, are densely clothed to their summits with tree jungle. Almost the only exceptions to this are the hill slopes facing the Manipur valley, which have been denuded of timber. The trees are of great variety; and in the ranges lying west of the Manipur valley large tracts contain *nahor* (*Mesua ferrea*), *jarul* (*Lagerstroemia Flos Reginae*), rubber, *tūn* (*Cedrela Toona*), oak, ash, &c. Bamboo jungle is everywhere plentiful. Towards the north, in the valleys dividing the hill ranges from one another, the trees attain an immense size and height; and where this kind of forest exists the bamboo is uncommon. The tea plant is found wild in the Hirok range between Manipur and Burma, and on the hills to the north. Teak is common on the slopes overlooking the Kubo valley. There are fine pine forests in the Tankul hills and on the ranges which stretch northward to the Lanier river. Rubber used formerly to be obtained in considerable quantities, but most of the trees have been killed by excessive and improper tapping. The forests lying between Manipur and Cāchār are worked by the Assam Forest department, which retains 25 per cent. of the profits.

Rents, wages, and prices. Rents are usually paid in kind, the ordinary rate being about $4\frac{3}{4}$ cwt. of unhusked rice per acre. The rate of wages for unskilled labour is 4 annas a day. Owing to difficulties of transport, the price of rice is low. The opening of the cart-road has developed a considerable export trade to the Assam Valley, but in spite of this common rice is often sold for less than a rupee a maund.

Minerals. The valley and the surrounding hills have not yet been sufficiently explored for their mineral resources to be fully

known. There are patches of coaly matter in the Kassom ridge, but experts are of opinion that there is little hope of discovering workable coal in these hills. Iron is found in the shape of small pisolitic nodules of hydrated oxide of iron, covered with alluvial deposits to the depth of 4 or 5 feet. At Kakching, to the south of the valley, the ore is dug up, smelted, and made into *daos* and farm implements. At Hundong, near Ukrul, and at Palel, limestone deposits are worked for the use of the State. A large part of the salt used in Manipur was formerly obtained from the brine wells which exist in the valley and in the adjoining hills, but since the opening of the cart-road Liverpool salt has to a great extent succeeded in ousting the home-made article. The only other mineral of interest is an unctuous clayey rock found in a small hill to the left of the main road leading northwards from Imphal town. This rock is believed to possess medicinal properties and is eaten by the people.

Arts and manufactures.

Silk is obtained from a worm that feeds on the mulberry. The climate and soil of Manipur are favourable to the growth of this tree, and a European firm has recently submitted proposals which, if accepted, will lead to the investment of a large sum of money in sericulture. The rearing of the silk-worm is at present confined to the degraded class of Manipuris known as Lois, a fact which in itself is enough to account for the stagnation of the industry. A certain amount of rough pottery is manufactured, and the Manipuris make the simple agricultural implements they require, and brass and metal vessels. The supply of these commodities does not, however, equal the demand, and has to be supplemented by imports from other parts of India. The people manufacture neat cane baskets and reed mats, and are fairly expert carpenters and wood-carvers. Native jewellery is also made, but the designs are rough, and possess little artistic merit. The skins of deer and calves are tanned, and saddles, shoes, belts, pouches, and other articles are manufactured. This leather is often tastefully enamelled in black.

Commerce.

The internal trade of the State is carried on at markets which are held in the neighbourhood of the larger villages. Two large markets are held daily at Imphal, at which the principal articles offered for sale are cotton and silk cloths and wearing apparel, pillows, rugs, Nāgā cloths, dried and fresh fish, vegetables, rice, reed mats, oil, and treacle. Almost all the business is transacted by the women, who are shrewd and capable, the men thinking it beneath their dignity to come and

traffic at the bazar. Very frequently no money changes hands, but goods are exchanged by barter. External trade is carried on with Kohīmā and the Assam Valley, with Cāchār, and to a small extent with Burma. The principal exports are rice, which goes by cart to Kohīmā and to the Assam-Bengal Railway at Dimāpur; and forest produce, which is carried down the Barāk into Cāchār. At one time there was a brisk trade in tea-seed, a considerable quantity of which came from Burma and merely passed through Manipur. The trade has, however, been killed by the depression in the tea industry, which has checked any tendency to extend the area under cultivation, and by the unscrupulous conduct of the contractors, who injured the reputation of Manipur seed by plucking and selling it before it was ripe. Cattle and buffaloes are exported in considerable numbers, but restrictions are from time to time imposed to prevent the State from being denuded of its live stock. The principal articles of import are mineral oil, betel-nuts, dried fish, salt, and cotton piece-goods and yarn. Dried fish, oil, and tea-seed come from the Burma frontier, but the bulk of the State trade is with Assam. Although the Manipuri women are keen and energetic shopkeepers, most of the whole-sale business is in the hands of the Mārwāri merchants, who have practically monopolized the trade of Assam. The dealers in cattle and forest produce are generally Muhammadans from the Surmā Valley.

Means of communication.

The most important line of communication in the State is the cart-road from Manipur through the Nāgā Hills, which meets the Assam-Bengal Railway at Dimāpur; 67 miles of this road lie in State territory. The gradients are very easy, and commodious resthouses have been erected at convenient stages; but as the road is unmetalled, it is practically closed for cart traffic during the rains. Excellent bridges, which for the most part are of solid masonry, have been thrown across all the rivers. There is a good bridle-path from Cāchār to Imphal, which passes over the five ranges dividing the State from British territory. Altogether twelve wire suspension bridges have been erected along this route, while the Jiri is crossed by a ferry. A third road leaves the valley to the south, and passing through Tammu reaches the valley of the Chindwin in Upper Burma. The first 29 miles are fit for wheeled traffic, but after this point the gradients become very steep, and in places riding is barely possible. Numerous driving roads in the valley are kept up by the State, each village being held responsible for the repair of a certain section. These roads

resemble those found in Assam, and consist of earthen embankments raised above the level of the rice-fields. They are unmetalled, and thus incapable of carrying much cart traffic in the rains, so that at this season of the year the rivers are used for the transport of produce. The only boats employed are canoes hollowed out of the trunks of trees. Three lines of post leave Imphal—to Tammu, to Kohīmā, and to Silchar. The first two are maintained by the State, the last by the Assam Government.

Famine. No famine has occurred in Manipur for many years, though a poor harvest sometimes causes a slight scarcity. Prior to the construction of the cart-road, it was almost impossible to export grain from the State, and there was nearly always a large supply in hand. These stocks have now been to some extent depleted, and a complete failure of the harvest would be attended by serious results, as it would be impossible to throw much grain into the valley. The chances of a serious famine occurring are, however, slight.

Administration. The State has never been divided into any minor administrative units. Since 1891 it has been administered by a Political Agent, as the Rājā placed on the *gaddi* after the outbreak was a minor. A junior member of the Assam Commission is usually deputed to act as Assistant to the Political Agent. The Medical officer in charge of the regiment at Manipur discharges some of the functions of a Civil Surgeon, and public works are carried out by the State Engineer. The land records establishment is in charge of a Sub-Deputy-Collector lent by the Assam Government.

Civil and criminal justice. Petty civil and criminal cases are tried by *panchāyat* courts sitting at Imphal and at nine places in the valley, which can impose sentences of fine but not of imprisonment. Appeals lie from these courts to the Chirap, a court sitting at Imphal, which exercises the ordinary powers of a first-class Magistrate. The Superintendent of the State hears appeals from the Chirap, and is invested with powers of life and death subject to confirmation by the Lieutenant-Governor. He also hears all cases in which hillmen are concerned. Civil and criminal cases to which European British subjects are a party are tried by the same officer in his capacity as Political Agent, or by his Assistant. Serious crime is not common, except among the hillmen, whose sense of the sanctity of human life is still somewhat undeveloped. Since the administration of the State has been placed upon a more satisfactory basis, raids upon villages have happily become less common; but murders, though not

on such a wholesale scale, still take place. Civil suits are generally of a petty character.

Land revenue. Under native rule, the ryots paid revenue in kind and labour. Officials, instead of receiving salaries in cash, were remunerated by allowances in land and rice; and public buildings, bridges, and roads were constructed or repaired by unpaid labour. Since the administration has been controlled by the British, the system of forced labour has been almost entirely abolished, and land revenue has been assessed at the rate of Rs. 2 per acre. The valley has been divided into five divisions or *pannahs*, each in charge of a collecting officer. A survey establishment has been organized, and the occupied area is being gradually measured, the result of these operations being to disclose a large area of unassessed cultivation. House tax is levied in the hills, and no attempt is made to ascertain the area actually under cultivation.

Miscellaneous revenue. There are practically no excise arrangements in the State. The Manipuris abstain from both liquor and intoxicating drugs. A little opium is used by Muhammadans; and the hill tribes prepare alcoholic liquors, both fermented and distilled, but no restriction is placed upon this practice. Salt is obtained from brine wells leased from the State, and is also imported from Bengal in considerable quantities.

Finance. The total revenue and expenditure of the State in 1903-4 and the principal items were as follows, in thousands of rupees. Receipts: total, 3,95; including land revenue 2,77, house tax 46, fisheries 24, forests 26, salt 6. Expenditure: total, 3,88; including State works 1,48, Rājā's civil list 50, police 60, tribute 50, land revenue 28, education 15.

Police and jails. A police station at Imphal town is the centre of the whole investigating agency. The civil police force consists of 19 men under a sub-inspector. In addition to the regular police, one *chaukīdār* has been appointed to every hundred houses. A battalion of military police is kept up by the State. The Assistant to the Political Agent acts as commandant, and the sanctioned strength is 13 native officers and 364 non-commissioned officers and men. Thirteen outposts along the main roads and in the hills are held by this force. There is one jail in the valley, at Imphal.

Education. Education has made very little progress in Manipur. At the Census of 1901 only 1·9 per cent. of the male population was returned as literate. An English middle school is maintained at Imphal; and in 1903-4 there were 29 primary schools in the State, two of which are located in the hills. The total

number of pupils on March 31, 1904, was 1,629. All except 46 of these were in primary schools. The girls' school has recently been closed; as it was considered that the advantages it conferred were out of all proportion to the cost of its maintenance.

There is one hospital at Imphal town, with accommodation for 14 in-patients. In 1904 the number of cases treated was 10,000, of which 300 were in-patients, and 400 operations were performed. The total expenditure amounted to Rs. 4,000. Medical.

Vaccination is not compulsory, but the Kūkis are the only inhabitants of Manipur who object to the process, and even their dislike is wearing off. The number of successful vaccinations in 1903-4 represented 58 per 1,000 of the population, which was considerably above the proportion in Assam as a whole. Vaccination.

[E. W. Dunn, *Abridged Gazetteer of Manipur* (Calcutta, 1891); Dr. R. Brown, *Annual Report of the Manipur Political Agency for* 1868-9; Sir J. Johnstone, *My Experience in Manipur and the Nāgā Hills*; B. C. Allen, *Gazetteer of Manipur* (1905); T. C. Hodson, *The Meitheis* (1908).]

Imphal.—Capital of the State of Manipur, Eastern Bengal and Assam, situated in 24° 49′ N. and 93° 57′ E. A cart-road connects Imphal with Kohīmā and the Brahmaputra Valley, and bridle-paths cross the hills that separate Manipur from Cāchār and Burma. The population in 1901 was 67,093, of whom nearly 96 per cent. were Hindus. The history of Imphal cannot be distinguished from that of the MANIPUR STATE, but of recent years it has been notorious owing to the outbreak that occurred there in 1891. A palace revolution had taken place, the Rājā had fled from the country, and the Chief Commissioner, Mr. Quinton, had proceeded to Manipur to settle the newly appointed ruler on the throne, and to arrest the Senāpati who was the original instigator of the revolution. The Senāpati declined to obey the summons of the Chief Commissioner, and the troops sent to arrest him were fiercely attacked. The engagement continued till the evening, when an armistice was agreed to, and the Chief Commissioner, with four officers, entered the Rājā's fort under a safe-conduct. The Manipuris, however, broke faith; the Political Agent was speared and the Chief Commissioner and his three companions formally beheaded by the public executioner. The attack on the Residency was then resumed; and the defenders, thinking it untenable, retreated to Cāchār. A few weeks afterwards Imphal was re-entered by three columns of troops, and satisfaction was exacted for the outrage.

Though containing a large population, Imphal is an overgrown village rather than a town in the ordinary sense of the word, and more than half the working males are dependent on agriculture for their support. Three rivers converge at this point; and along the banks of each river is a single row of cottages, each standing in a garden about half an acre in extent and buried in dense groves of bamboos and fruit trees. Viewed from above, the town has the appearance of a dense forest with a large square clearing in the centre. In this clearing are situated the palace of the Rājā, the cantonments and offices, and the houses of the European residents. The town contains a small jail with accommodation for 100 prisoners, and a hospital with 14 beds. The rainfall is moderate (70 inches), and, as Imphal lies about 2,000 feet above the sea, the climate is cool and pleasant. The daily bazar held in the town is the great centre of trade for the valley. Drinking-water is usually obtained from the rivers, which are exposed to every form of pollution, and outbreaks of cholera are frequent and severe.

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Oxford: HORACE HART, Printer to the University.


EASTERN BENGAL
AND ASSAM
WITH BHUTAN
Scale 1:4,000,000 or 63·1 Miles to an Inch
English Miles
0 20 40 60 80 100
DIVISIONS OF EASTERN BENGAL & ASSAM
1 DACCA DIVISION
2 CHITTAGONG DIVISION
3 RAJSHAHI DIVISION
4 ASSAM VALLEY DIVISION
5 SURMA VALLEY AND HILL DISTRICTS DIVISION
Native States coloured yellow
Railways opened and in construction
Canals
CONTINUATION ON SAME SCALE
J.G.Bartholomew.
TIBET
SIKKIM
BHUTAN
LAKHIMPUR
SIBSAGAR
DARRANG
GOALPARA
KAMRUP
NOWGONG
RANGPUR
DINAJPUR
BOGRA
MALDA
RAJSHAHI
PABNA
MYMENSINGH
DACCA
FARIDPUR
CACHAR
MANIPUR
NAGA HILLS
LUSHAI HILLS
CALCUTTA
Darjeeling
Gangtok
Jalpaiguri
Cooch Behar
Dhubri
Dibrugarh
Sadiya
Kohima
Imphal
Manipur
Shillong
Bhamo
Paletwa